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FARM AND FIRESIDE

EVERY OTHER WEEK THE NATIONAL FARM PAPER

SATURDAY, OCTOBER 11, 1913 5 CENTS A COPY



"No, my boy, we won't waste our time and money here. The big show is the best"

DON'T MISS
THESE GOOD THINGS
SOON TO COME!

Where Friends Meet

"Guilty or Not Guilty?" at once suggests to you a recent FARM AND FIRESIDE cover. That cover was a wonderfully popular one. In fact, so much satisfaction was expressed about the characters in the picture that we were delighted to remember another, and equally good, picture of the "old gentleman" which we had in store for FARM AND FIRESIDE readers. That picture will come on the next number. The old gentleman and a friend of his meet on the battle-field of fun. Their smiling faces will greet you.

The Barn That's Inconvenient

Many of us have just such barns on our farms. Everyone works to make his farm-building layout so simple that much work can be done in a short time. This is necessary now that the farmer's time is considered in dollars and cents, just as is the city man's time. David Buffum will write about his experience with barns, and will point to several ways of getting convenience economically. He will tell of plans that can be worked out.

Horseshoes as Time-Savers

Our recent page showing how horseshoes could be used to lighten the work on the farm met with favor everywhere. There will be other suggestions along this same line. For your particular purpose suggestions made on this next horseshoe page may be more practical and definitely useful than those first printed. They are all good ideas.

Hallowe'en Fun

Let magic and necromancy run riot on Hallowe'en. There will be a page telling you how to do it: a page presided over by a witch with a black cap and a broomstick, in whose dark caldron the secrets of the future are boiling. Dip in your spoon and draw them out.

Did you ever see a mirror that reflected an absent face, reading it out of your most secret heart? We shall tell you how to have such a mirror of your own.

Tongues of fire! On Hallowe'en that is no merely descriptive phrase. Fire talks of travel, of riches, of lovers! Listen, for it talks to you.

A \$50,000 Poultry-Plant

The farm isn't worth that, but \$50,000 worth of business is done annually, at a good profit. It is the story of a big New Hampshire poultry-farm. The manager of that farm has exhibited the snap and ginger and originality that has won for him success. This is the story of a farm that has on it ways of doing work that will be suggestive to poultry-keepers everywhere.

Fresh News from Our Capital

Hasn't Judson C. Welliver given us some mighty important things in the last few issues? That pure-food question—that is, whether we are going to get what we pay for or not—is a matter we ought to investigate. Mr. Welliver does a lot of investigating for FARM AND FIRESIDE readers. He is going to keep this work up. People everywhere will come to see that he is right in saying that some of our present laws are by no means ideal if they are to work out the conditions they ought to work out here in America. With more vigor than ever, The Lobby is going to praise the good work that is being done, and criticize harshly where criticism is necessary. You can be in Washington all the time by reading The Farmers' Lobby.

The Key to the Bank

"Who should manipulate the family purse-strings?" is the question asked in our new department, the Experience Bazaar. See what you think about it when you read the editorial postscript.

The Kittens' Party

There are some wonderful kitten pictures and an account of Curly-Locks' party for our very little folks. They will be glad to know that we are going to give them a round dozen of bewitching animal stories, with fairies peeping in too, perhaps.

WITH THE EDITOR

Common Sense
and Co-operation

Mr. Peter Radford of the Texas Farmers' Union has a few words to say about the present tendency to promote farmers' organizations. In a very widely circulated letter he criticizes the whole movement in some very true remarks, and some not so true. "Never in modern history," says Mr. Radford, "have there been so many movements organized in the United States to help the farmer as at present, and there are many 'cure-alls' with free samples for every ill that besets the farmer."

Well, I don't know about that. I seem to remember when the Grange movement swept over Iowa when I was a boy, and the Anti-Monopoly movement, and the Greenback wave, that we were obliged to step lively to keep out of the way of organizers. The new thing in the situation is the vast interest and the manifold activities of the state departments of agriculture, experiment stations, agricultural colleges, bankers' organizations and other associations of people who are not farmers. And in this connection it must not be forgotten that the best organized farmers in the world are mainly those whose governments have taken a lively interest in the matter.

"The farmer," says Mr. Radford, "can only be helped through common sense and co-operation. The farmer can get about on his farm, but he loses his way in the market-places, and it is there he most needs assistance." This is a true saying. But I think most of us will be rather surprised at Mr. Radford's next remark.

There are too many agricultural associations. The mania for organization is causing confusion of effort and a wasting of energy. Everybody, including the Government, wants to organize the farmers, and if the farmer joined all the associations, read their literature and attended their ordinances he would have no time to plow. It is passing strange that our state legislatures will appropriate thousands of dollars, much of it to be used in organizing agricultural associations in localities where the farmers are already thoroughly organized, and oftentimes business men's associations send out emissaries to organize the farmer, and at best they can only hope to duplicate existing organizations. The farmer does not need organization as much as co-operation, and plans should be formulated by which the Government can effectively co-operate with associations which the farmers have organized, and business men should co-operate in their efforts with regular farmers' organizations.

Lessons from
the Danish

I dislike to be disagreeable, but it seems to be my duty to say that some of this is awful slush. I agree as to the hothouse character of forced and promoted organization which is not rooted in farmers' own efforts, but there aren't half as many agricultural associations as there should be. The Danish farmer is perhaps the best organized in the world, and he usually belongs to from four to a dozen co-operative associations—separate ones, mind you, and each with its literature to read and its "ordinances," whatever that means, to attend.

He keeps bees, and belongs to an organization for selling honey and studying apiculture.

He grows a few hogs, and belongs to the co-operative organization which slaughters the hogs, cures and sells the product and, incidentally, was strong enough to fight the American Beef Trust for the British market and win.

His Raiffeisen bank loans him money when he needs it—and that is another organization. He almost certainly is a member of a co-operative creamery association, a poultry association, and a fruit-selling association.

Does the Danish farmer have time to plow? He surely does. He plows all around most farmers in efficiency and prosperity.

Let's Work for
More Associations

Too many farmers' organizations? Why, I don't know of a single farmer within ten miles of my farm who belongs to any organization at all. I suppose that Mr. Radford is speaking especially of the Texas farmers. Well, I feel sure that he is quite as mistaken with regard to them. To be sure, the farmers of Texas are better organized than some; but I make the statement that they would be better off if they had a lot of auxiliary associations which would do work in which only a part of the community are interested. A big general organization is necessary, but such an organization will not do the particular thing in which only some farmers are interested as well as a little association of their own will do it. I am canning tomatoes. As a canner of tomatoes I want to belong to an association of farmers who are doing the same thing. We have our own problems in which the Farmers' Union, or the Grange, or the American Society, would have only an indirect interest.

Is Mr. Radford afraid that the National Farmers' Union will suffer from divided allegiance if his members join other and more special organizations? I believe he is. Otherwise why should he think along these lines?

The National Farmers' Union is the most powerful organization on the western hemisphere, and it has taken half a century of effort and hundreds of thousands of dollars to build up the farmers to their present degree of organized efficiency. This powerful machinery already in operation should be utilized by the Government in their marketing plans, and all local unions should be willing to co-operate with governmental agencies in solving the market problems.

What he says about the National Farmers' Union may be accepted as true—though the Grangers might wish to argue some points with him; but even though every farmer in the United States belonged to Mr. Radford's splendid order there would be need for many more organizations.

It's a Big Job
for All of Us

We want thousands more of these special organizations. The Union isn't half covering the country. Let the good work go on, inside the Union, the Society of Equity, the Grange, and outside them. And let me assure Mr. Radford that the farmers who become good members of these smaller associations outside any of these organizations will be easier to organize along broader lines than ever before, after successful experience along special lines; and that those who now belong to the greater organizations will be better members when they have special organizations of their own. And in conclusion let me say that agricultural organization is too big a thing to be monopolized by any society, or any three.

Robert S. Squire

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FARM AND FIRESIDE is published every other Saturday. Copy for advertisements must be received three weeks in advance of publication date. \$2.50 per agate line for both editions; \$1.25 per agate line for the eastern or western edition singly. Eight words to the line, fourteen lines to the inch. Width of columns 2 1/2 inches, length of columns two hundred lines. 3% discount for cash with order. Three lines is smallest space accepted.



PUBLISHED BY
THE CROWELL PUBLISHING COMPANY
SPRINGFIELD, OHIO
Branch Offices: 381 Fourth Avenue, New York City; Tribune Building, Chicago, Illinois
Copyright, 1913, by The Crowell Publishing Company
Entered at the Post-Office at Springfield, Ohio, as Second-Class Mail Matter

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SUBSCRIPTION PRICE

One Year (26 numbers) 50 cents
Canadian, 1 Year . . . 75 cents
Single Copies, Each . . . 5 cents

Subscriptions and all editorial letters should be sent to the offices at Springfield, Ohio, and letters for the Editor should be marked "Editor."

Silver, when sent through the mails, should be carefully wrapped in cloth or strong paper so as not to wear a hole through the envelope.

Vol. XXXVII. No. 1

Springfield, Ohio, October 11, 1913

PUBLISHED
BI-WEEKLY

Who Studies Agriculture?

THE agricultural colleges are crowded with boys from the cities and towns. Less than a third of them are from the farms. At least that is the case in Pennsylvania, and it is probably true of most of the colleges. Thirty per cent. from the farms, and the other seventy per cent. from villages and cities—about half from cities and towns of over 5,000 population.

This means that about three out of every four graduates from the agricultural colleges lack the farm background. These young men may be good students, but it is fair to say that they do not know whether they like farming and farm life or not, because they have never tried it.

The best part of education is in the life which lies back of the things taught. This life the farm-bred student of agriculture has. The town-bred student has it not, and it is a very grievous lack.

Agricultural education is becoming fashionable. Young men without any call to the gospel of farming are in the agricultural courses, because they think it is a good course, or because they swim with the current and take what the other fellows are taking.

The boys on the farms are not many of them taking the agricultural courses for the purpose of fitting themselves for farm life. Probably they never will.

For that reason the true policy of the States is to ruralize the rural school, fill them with vocational studies, train common-school teachers for the teaching of rural schools which are correlated with farm life, and thus make sure that the boy or girl who goes to school at all will have a practical education—whether he goes to high school or college or not.

Split Pastures

IT IS perfectly possible to build your pasture fence so as to make the same area produce more grass. The man who thinks this a tall story should think again. This is the plan: Divide the pasture into nearly equal lots by a partition fence with gates between. Turn the stock into one lot for two or three weeks, and let the other grow undisturbed. When the feed gets short, turn them into the other field, and let the first recuperate. If it is a bluegrass and white-clover pasture this plan will allow the clover to increase. It will conserve all grasses which are apt to be stunted or killed by too close cropping.

But the real reason why each field will grow more than half the pasturage which both will furnish when they are pastured together lies in the fact that the resting field will be able to develop longer blades of grass than if pastured all the time. A grass-blade needs to have size in order to make its best rate of growth. A blade four inches long will grow much faster than one an inch long. The pasture which is gnawed down close all the time is deprived of the vital organs by which it renews itself.

The Population Question Settled!

A GEORGIA dweller in Backtothelandia publishes the fact that cheese-cloth colored brown with creosote is better than the uncolored cheese-cloth extensively used to cut off part of the sun's rays from tender plants. Probably that's so, and we pass the word along to the brethren. But the Backtothelander then goes on and asserts that the colored cheese-cloth cuts off the "actinic" or "bad" rays of light and lets the "fertile" rays through! This simple device, he thinks, will enable anyone to grow enough on a quarter of an acre of "pine barrens" or "any soil from Georgia to southern California" to support a family. This cheese-cloth idea, he thinks, "might make thousands prosperons who are now wilting under the

fierce actinic rays." Thus we learn that in Backtothelandia the fertility is in the sun's rays, so it is not needed in the soil; that in Backtothelandia, counting five to the family, pine barrens will support (under brown cheese-cloth) twenty people to the acre, or 12,800 population to the square mile, without reference to potash, phosphorus or nitrogen, by merely shutting out the actinic rays of the sun! This population is four times as dense as any rural population in the world. But its support from the soil is easy in Backtothelandia. Great are the Backtothelander's, and the magazine editors are their profits!

Wisconsin Crows

KANSAS has been flapping her wings and crowing and Cohnning around for so many years that Wisconsin has learned the trick. During the height of the drought this summer the Chamber of Commerce of Marinette, Wisconsin, wired the governors of Illinois, Iowa, Missouri, Kansas, Nebraska and Oklahoma offering free pasturage for all stock which might be shipped from the drought-stricken districts. "Plenty of excellent pasturage and water," said the Wisconsin people. Of course it was a bluff. To be sure, it was a perfectly safe bluff. But it was good advertising of the immense live-stock resources of the forest regions of Wisconsin.

Concrete and Gravel Roads

A PROMINENT good-roads advocate belonging to the American Automobile Association says, "It is a waste of time to build roads of anything better than gravel and not so good as concrete." By which he means that if the road is to be anything less than absolutely permanent, it should be of gravel or plain earth. One thing is sure, the automobiles are putting macadam roads in the category of things which will not do. Concrete roads built over twenty years ago have been kept in repair under country-town conditions at an annual expense rate of fifteen dollars a mile, and are still better than any macadam road is likely to be in one tenth the time in this age of rubber-tired vehicles. The ideal road would seem to be a narrow concrete roadway with earth or gravel ways at the sides. The motor-cars will follow the concrete, and in ordinary going the drivers who consider their horses' feet will keep on the pleasanter and softer track at the side. In bad weather all could use the narrow concrete way. The earth or gravel road should run alongside every macadam, brick or concrete way. It keeps teams off the motor path and makes pleasanter going for both horse and horseman. The time will come when permanency in our roads will be more highly appreciated and worked for more generally.

When Should a Cow Go Dry?

THE dry cow is easiest cared for during the time of short pasture. She does not need as much juicy feed as the cow that gives milk. If she comes fresh in the late fall she can go on regular winter feed and be kept up to her normal flow all winter.

In the spring she will have the fresh pasture at just the time when she needs it to keep her yield from falling off. She will give most of her milk when milk and butter are scarcest and highest. She will be ready to dry off when the flies are worst for cow and cowherd. And the busy fall days will not be made busier by the necessity of milking her. What can be said against this argument?

Everything comes to him who waits, and
goes for him who wastes

Some Light on Cancer

ONE person in eleven who dies past middle age is carried off by cancer. It is the most dreadful of diseases, and so common that if it were more sudden and spectacular the world would be wild with terror at it. A commission engaged in studying cancer in England reports that none of the treatments which we have hoped might be cures are effective. This is disappointing. But we want light on this disease, and the report gives us a little. Is cancer hereditary? This is a question which thousands are asking themselves every day.

Well, this report shows that mice which are born of cancerous parents develop the disease to the number of one in every five, while those born of non-cancerous parents have it in the percentage of one in nine. Mice are especially subject to cancer, and the same ratios of liability may not exist in human beings. But the facts are interesting. People who have had cancer in the family may not know that it is thought to be hereditary through the mother rather than the father. Such, however, is the fact.

The best belief now is that there is no cancer germ. Experimenters have shown their disbelief in the germ theory of cancer by cutting open their own flesh and laying malignant cancer tissue in it, and sewing it up! Cancer seems to be composed of tissue the cells of which have an almost independent life, with its own impulses and "desires," impelled by which it develops to the destruction of the body in which the "rebel" cells develop. Cutting the cancer out before it has a chance to develop too far is a successful treatment, and as yet the only one.

The method of applying fertilizers makes a difference with the result. For instance, tests made in France show that nitrates applied to a beet crop bring the best results when put in deeply, while shallow application is best for wheat. This is exactly what one would expect from the root habits of the two crops, but it takes a test—and sometimes hundreds of tests—to make sure.

Kiln-Dried Hay

MAKE hay while the fire burns! This may succeed the old maxim if the work of the United States Bureau of Farm Management is followed up. A plant has been installed in Missouri for the curing of alfalfa, cow-peas and other leguminous forage crops in a steam-heated kiln. The kiln-cured hay is better, both in appearance and feeding value, than the sun-dried hay, and the farm animals prefer it. It is not thought that the kiln will drive the sun out of business where Old Sol is a regular worker—in other words, in climates favorable to haymaking—but it will enable the grower to make his hay regardless of weather, and to make it so as to grade "choice" in any market.

The kiln may be used to finish the curing begun by the sun. The cost is less and less per ton as the amount is increased—large-scale production being cheaper than small-scale. The loss of the leaves and smaller stems—the best part of the hay—is entirely prevented by kiln-curing. The drying kiln is too expensive except perhaps for large growers; but smaller producers might be able to operate the plan successfully by co-operation. The Missouri researchers are of the opinion that the drying plant ought to pay for itself in one season under favorable conditions, but that it may sometimes take four years for it to pay out. This is one of the things that the up-to-date farmer may well keep his eye on, and his money out of, for a while. It looks promising, but needs development. And development it will have. If no ideas of this sort had been started in the past, we would not be very far along in farm progress.

The Con Man in the Country

Floating a Bond Issue for Consolidated Farms and a Model Town—A Story

By Elliott Flower

What Has Already Been Told

Benjamin Babbitt, a Chicago promoter, has interviewed Miss Alice Baird of Saskatchewan in the endeavor to interest her in the consolidation of ten farms, including her own, into one large farm. The consolidated farm is to be managed by a stock company along scientific lines.

Miss Baird rejects the proposition, but for \$200 grants him a thirty-day option on her farm at a purchase price of \$15,000. Babbitt's local agent is Howard Redding, a young real-estate man.

BABBITT hailed from Chicago, as he said, but what he failed to say to Miss Baird or anyone else he met was that he had left Chicago for Chicago's good and his own safety, carrying with him a plentiful supply of cash and a head full of schemes. The cash had been lured from the pockets of various unsophisticated people in a hurry to get rich, and the schemes were designed to lure still more cash from the pockets of other people in a hurry to get rich. He never had been reached by the law, but he had a feeling that if the law kept on reaching for him it might get him. A man who skates on thin ice never can be sure that he won't strike a spot too thin to bear his weight. Babbitt's last Chicago venture had been over very thin ice.

Another thing that he failed to say to Miss Baird or anyone else was that he had made various brief stops in western Canadian cities and had found the officials—both government and railroad—singularly averse to the improper exploitation of the resources of their country. Combined with this aversion to anything that savored of misrepresentation and fraud was an inquisitiveness as to his purpose and methods that was very trying to a man of his vulnerable record. So he had sought and finally found a place sufficiently remote from the larger cities to be reasonably safe and yet near enough to be a suitable location for at least one of his schemes.

Having the location and the scheme, he looked around for a suitable local assistant—and found Howard Redding. He wanted a man who was not too big and not too smart, and Redding seemed to meet these requirements. A big man might take too large a hand in the affair and ask too much for his services. A smart man might look too deep into it. Redding was merely a curbstome real-estate broker who would be too thankful for so large a commission as this would bring him to ask any troublesome questions. He had a tiny office, but he carried most of his business under his hat and made his deals wherever it was most convenient at the moment. There are many such in rapidly developing districts, and the smart ones make good. Babbitt did not think Redding was a smart one.

Nevertheless, Redding did his work so well and so unquestioningly that Babbitt took him more and more into his confidence. Redding was making more money than ever before in his life, and he seemed content to do whatever was asked of him so long as the money was forthcoming. True, so far he had been asked to do nothing that was not legitimate and proper, but he somehow conveyed the impression that he would not be too scrupulous if he were asked. So Babbitt had talked more and more freely with him as the plan developed.

It was too late to see him when Babbitt got back to town that night, but the promoter found him in his little office the first thing in the morning.

"Look here!" exclaimed Babbitt, without preliminary; "what did you tell that girl?"

"Just what I told the rest of 'em," replied Redding. "Why?"

"Well, she acted like she'd got this thing sized up and was trying to make a monkey of me," grumbled Babbitt.

"Did she?" asked Redding.

"Did she what?" demanded Babbitt suspiciously.

"Act that way?" returned Redding innocently.

Babbitt gave his assistant a sharp glance, then laughed. "She certainly did," he said. "She tripped me up so much I couldn't get my talk started right, and then she got me fixed so awkward I felt foolish, which is no way for a man to feel when he's explaining a business proposition."

"She's a smart girl!" commented Redding.

"I'm wondering," mused Babbitt, "just how smart she is. Some girls just naturally like to make a man look foolish for no reason at all, and the bigger the man—"

"You ain't very big," interrupted Redding.

"Not physically," admitted Babbitt, after a moment of doubt as to just what his agent meant, "but I'd show I'm big enough to settle with that girl if I was going to be here long enough."

"How?" asked Redding.

"I'd marry her."

"Would you?"

"I would."

"Could you?"

The question, while not offensively asked, drew another sharp glance from Babbitt. "Couldn't I?" he queried.

"There's hardly an unmarried man in these parts who wouldn't be glad to do that very thing," replied Redding evasively.

"Well, I'd do it!" declared Babbitt. "I'd marry her, sell the farm and take her away. She's worth taking! If only somebody else would do that," he added with a sigh, "it would be a good thing for us. We might get the new owner to come in."

"You didn't get her, then?"

"I did not," confessed Babbitt glumly. "The best I could do was to get a thirty-day option at \$15,000."

"Whew!" exclaimed Redding. "That's more than it's worth, everything on the place included."

"Except the girl," qualified Babbitt.

"Oh, of course, except the girl," agreed Redding.

"But I may have to take it at that price," grumbled Babbitt. "I don't know. There may be some other way, but I don't see it now. That's why I paid good money for an option—to get time to think. Everything else is sure, of course?"

"Clucked tight," Redding assured him. "You saw the papers. They all agree to put in their farms—nine of a hundred and sixty acres each—the moment the company is organized and ready to take them over."

Babbitt nodded. "And this Baird place is just about the center of the bunch," he reflected. "We've got to have it, but it's going to knock a big hole in the profit."

"I don't see why," argued Redding. "Of course it's a big price, and you'll have to lose something, but you can put it in the combination yourself and get almost what you pay for it in stock."

"But that would be paying cash for the stock," objected Babbitt, "and I don't want any cash stock. I don't want any more stock than I've already got coming anyhow. It's going to be hard enough to sell that."

"Why, I thought—"

"Oh, sure," interrupted Babbitt. He had said more than he intended, but he felt that it was safe with Redding, and he was beginning to see a possible advan-

save their farms, but that's up to them! I don't touch a thing but the stock I earn."

"I see!" said Redding, although he did not seem to see very clearly. "I see! But you wouldn't let a woman in for a thing like that, would you?"

"I wouldn't pay real money to keep her out!" snorted Babbitt; and then he added explanatorily, "I don't go after women, even if they are the easiest marks as a general thing, but you've got to take people as they come in business. When women play a man's game they've got to take a man's chances. I wouldn't let a woman in for this, of course—certainly not—but I'd pay five hundred large dollars to anybody that could get that tenth farm put in like the others—for stock. That's what I'd do, Redding; and if I knew this country and the people in it like some people do I wouldn't lose any time going after a nice little bunch of money like that, either."

Redding nodded thoughtfully.

"The little bunch of bonus stock I mentioned a minute ago," pursued Babbitt temptingly, "would add a bit to that."

"I'll see what I can do," decided Redding. "Perhaps some of the neighbors might get her, but I've got to work it careful. It ain't a thing that can be done in a hurry."

"Sure not," agreed Babbitt; "but it's got to be done inside the option limit, you know."

It was a week before Redding reported again, and then he found Babbitt somewhat dazed. A dazed promoter of this stripe is an anomaly, calculated to occasion surprise, but Babbitt was certainly dazed.

"Can't seem to do anything with that girl farmer," Redding reported.

"Never mind that now," returned Babbitt. "I've got another problem to solve. Do you know a young fellow named Wardley?"

"Sure," replied Redding. "He's a telegraph-operator."

"Where does he work?"

"Nowhere, just now."

"Any money?"

"Oh, he might have a hundred or so tucked away."

"Not a thousand?"

"I should say not! Why?"

"Well," explained Babbitt, scowling perplexedly, "he's somehow got wise to my option—"

"That's no secret out that way," put in Redding.

"—and he's just been here," continued Babbitt, "and offered me a thousand for one acre—a thousand dollars for just one acre. Began at five hundred and went to a thousand! Wants an acre on the road just west of the farm buildings. Now what do you make of that?"

"Oh, that's the telegraph pool, probably," replied Redding.

"The what?"

"The telegraph pool. There's a little bunch of railroad operators between here and Saskatoon who take a flier now and then on tips they grab off the wire—not many and not much, but they certainly have the inside when they do play."

"But a thousand for an acre that I'm getting for less than a hundred!" persisted Babbitt. "What's the answer to that?"

"It must be the new transcontinental," said Redding.

Babbitt saw it all in a flash. The third of the great transcontinental railroads of Canada was pushing its way to the Pacific Coast, and already many fortunes had been made by those fortunate enough to secure advance information as to its plans. Babbitt already knew that, and Babbitt could see that this information was just what a pool of telegraph-operators would be likely to secure. Moreover, this was the promised road of which the girl farmer had spoken.

"By George!" muttered Babbitt. "This may be a bigger thing than Consolidated Farms ever could be. What do you know about it, Redding?"

"Not a thing," replied Redding. "It's nothing but a guess with me."

"Well, can't you find out something?" demanded Babbitt sharply.

"I'll try," promised Redding.

"Try!" snorted Babbitt. "Great Scott! you don't seem to see what it is! It's the chance of a lifetime, man!"

"I'll do the best I can," said Redding, "but they keep these things pretty close, you know. Didn't you get anything out of Wardley?"

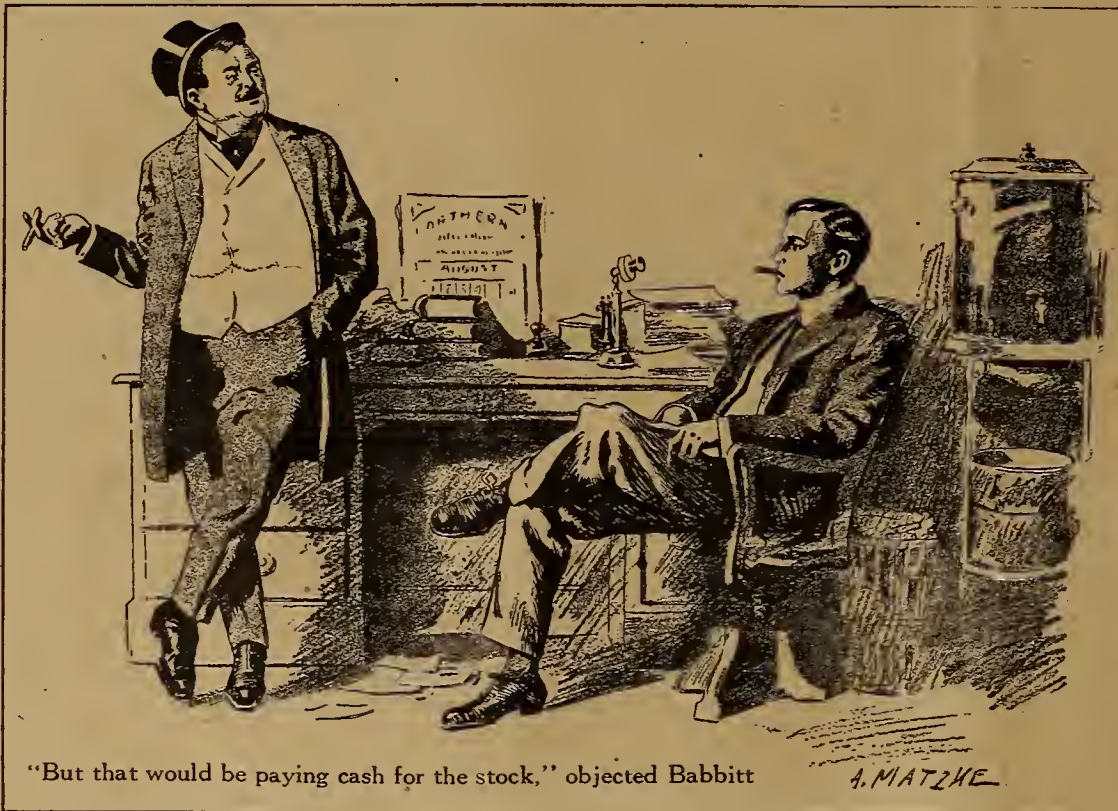
"No," grumbled Babbitt. "He just winked and looked wise when I asked him why he was so anxious for the land—seemed to think I knew all about it and had got in first."

Redding did not seem to be very successful in his quest for news. He reported a few days later that it was rumored the new road would pass to the north and cut through or touch their group of farms somewhere, but he could learn no more than that. The rumor had not gained general circulation and could not be verified. Indeed, there seemed to be a strong desire on the part of the few in the best position to know the facts to keep it from spreading.

"That sounds good," commented Babbitt.

"By the way," added Redding, "Atkins was in to-day, and he wants to draw out of the Consolidated Farms deal."

"Sure!" exclaimed Babbitt jubilantly. "He's got the tip, too! That makes it look better yet! But don't you let him out till we know [CONCLUDED ON PAGE 14]



"But that would be paying cash for the stock," objected Babbitt

tage in taking him into his full confidence anyway. "There isn't anybody better fixed than I am to unload stock on a goggle-eyed public," he went on. "I can put it out through Chicago, where I've got friends who are artists in that line of work. Just load them up with figures of what's been made off an acre of ground here and there where the making is good and a lot more showing the economy of operating on a big scale, and they'll put it over as well as anybody could, but fifty thousand is about the limit for this deal. Take fifteen thousand out of that, and it makes quite a hole."

"Oh," murmured Redding after a moment of reflection, "you're going to sell your stock first."

"Surest thing you know!" returned Babbitt. "And I don't mind putting a bit over for you at the same time," he offered, "just as a bonus for your work."

The covetous gleam in Redding's eyes convinced Babbitt that he had made no mistake. It is always better to let a man in, he reasoned, than it is to leave him on the outside with a little too much knowledge for safety. Besides, he had a distinct purpose in view now. But whatever elation Redding may have felt found no expression in words.

"What about the treasury stock—the hundred thousand for working capital and model town?" he asked.

"I don't think I'll have time to do much with that," replied Babbitt carelessly, "although I may sell some."

"And the money from that?"

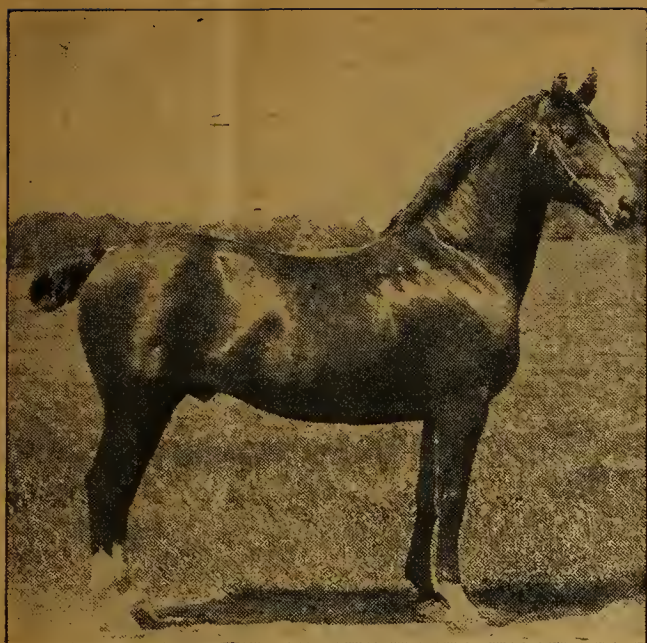
"Goes right plumb into the treasury!" declared Babbitt. "I'm no thief!" he added virtuously. "I'll take what I get for my own stock, but I won't touch a penny of the rest. It's too risky anyhow! The company gets that! But I just naturally sell my stock first, as any business man would."

"Oh, of course," agreed Redding, "but how does that leave the company?"

"Why, the company still owns the farms," explained Babbitt, "and the farmers still own their stock in the company. They can't ask anything better than that, can they?"

"Sounds all right," conceded Redding, "but—"

"It is all right," insisted Babbitt. "Of course, if they can't carry the Consolidated Farms scheme through after I've planned and started it for 'em, why they'll probably have to redeem the outside stock I sell to



The army mount—true Morgan characteristics

FOR short distances on the road or errands upon the farm a horse can be saddled and bridled at very short notice and much less time consumed than is commonly spent in harnessing to a gig or buggy. I have found this so true that when managing large tracts of land I have always had at least one horse that was satisfactory to use under the saddle. I also found myself using him to go to the store, post-office or on similar errands, when, if I had not possessed him, I would have gone to the greater trouble of "hooking up" a team.

The term, "saddle-horse," as commonly used, means a horse that is properly bitted for the purpose, that will guide by the neck, and that has all the so-called saddle gaits, and that has also a certain poise and carriage that are largely the result of careful training. The education of such a horse is an art in itself and requires a great deal of time and patience; and the purchaser has, of course, to pay for all this. In Europe, where the art of training saddle-horses is carried to far greater perfection than it usually is in this country, it is considered a science, and such it really is, as will be evident to anyone who reads carefully any of the foreign works on this art. Upon my bookshelves are several of these works, among them a translation of a Russian treatise by the Chief Instructor of the School of Cavalry in St. Petersburg. The author's scientific and practical knowledge of his subject is beyond all question. But few farmers would read this exhaustive treatise.

The Horse Must be Handy Under the Saddle

That the thorough training taught by the foreign riding masters and instructors of cavalry is desirable in horses used exclusively for the saddle cannot be disputed. But in many instances (certainly in that of the farmer's riding-horse) it is not necessary.

All that the average farmer needs in his riding-horse is an animal that is sure-footed, spry and handy under the saddle; and to this end he can be suitably educated by anyone who has had a little experience in general horsemanship, and who will bestow some common sense upon the matter.

Although there is a register of American saddle-horses, a very little study of its pedigrees will show that the American saddle-horse, so called, does not differ greatly in his blood lines from others of our road-horses. And so the farmer may be sure that he does not need a horse of this particular stock for a saddle-horse; most horses that are fairly well bred and that are sure-footed and active will make good saddle-horses. The first-named quality is the most important of all. Lack of sure-footedness is the most undesirable of all things in the horse that is to be ridden. In my younger days, when not as particular about this point as I have since become, I received a number of severe knocks from horses stumbling and falling under me; and since I have grown older and heavier I regard a stumbling saddle-horse with a feeling akin to horror.

There are several gaits often deemed of great importance in the saddle-horse. The single-foot and amble, which are usually considered the easiest of all for the rider, are not natural gaits—that is, the horse

The Saddle-Horse for the Farm

His Usefulness Will Depend Much Upon His Training

By David Buffum

rarely, if ever, uses them of his own accord when in pasture. He usually requires some effort on the part of his rider to hold him to them. However desirable these gaits may be for those who want the easiest horses, they are not, for practical purposes, essential. The trot, canter and walk are the only gaits that I ever cared for in my riding-horse. Of late years I have come to care nothing for the canter; the trot and walk being the gaits that I most prefer. The trot, I know, is very commonly considered a hard gait, but, if one is accustomed to it, it is no harder than any other, and for long distances a horse can be ridden at the trot with less fatigue to himself and no greater fatigue to his rider than any other gait. If my reader can be brought to agree with me upon this point (and I believe he can be), he will see how little is required in the matter of training his riding-horse to gaits.

Experience in Riding Gives the Best Viewpoint

But although the green colt, if merely taught to bear the weight of a man upon his back, can be ridden, as well as driven, there is a certain stiffness and awkwardness in the horse unaccustomed to the saddle that is decidedly unpleasant for his rider. Such a horse is not only unhandy (to use a Yankee phrase) but is not graceful to look at. He neither looks nor acts and a certain training is necessary to eliminate awkwardness and pleasant for his rider.

The system of basic principle

look at. He neither like a saddle-horse; training is necessary this stiffness and awkwardness to make him fit and saddle use.

M. Baucher forms the of the foreign school of horsemanship. Stripped of its verbiage and confusing terms, this elaborate (and I must, in justice,



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A certain poise and carriage result from careful training

add, excellent) system amounts to simply this: that all the forces of the horse should be so suppld and brought under direct control of the rider as to create in him the same difference from the raw horse that exists between a trained and graceful dancer and the raw youth who is just attempting to learn the Terpsichorean art.

The Baucher system deals with all parts of the horse. But anyone who studies the system or, indeed, knows much about horses can see that, however desirable it all may be, the parts with which we need most concern ourselves are the neck and jaw. For such a simple matter as the mere making of one of the farmer's horses handy to ride we need not concern ourselves with the rest. They are too unessential.

To be pleasant to ride, the horse should carry his face in a line perpendicular to the ground and be what is termed "light in hand"—that is, he should have his feet well under him and should yield readily to the pressure of the bit, never "hogging" upon it or thrusting his nose rigidly forward as so many horses will do if accustomed only to being driven in harness. To this end the riding master has elaborate rules, but the object can be obtained in as great a degree as is necessary for the farmer's use in a much simpler way.

Have a cotton cord about the size of your finger, and tie one end around the horse's neck about where the collar would be. Pass the other end through his mouth and back into your hand. Now pull upon the cord, and the horse's nose will be drawn toward his breast.

Hold in this position for a few seconds until he ceases to resist the pressure; then release and repeat the operation. As you proceed with these lessons, maintain the tension of the cord, when the horse's face is perpendicular to the ground, for a somewhat longer time, until he will stand with his head in this position, making no resistance to the pressure. Do not make these exercises too long; fifteen or twenty minutes is enough; then put up the horse, and in an hour or so repeat the exercises. To make thorough work the horse should be subjected to this training, at intervals through the day, for several days; a week of it will do no harm. Now, if it is his owner's wish (as it is usually mine) to use an ordinary snaffle bit, put on a bridle with this kind of bit and, being still unmounted and standing beside your horse, pull on the reins until the horse's face is perpendicular to the ground; then hold firmly until he ceases all resistance—a yielding which is usually accompanied by a champing of the bit. Exercise him in this way, just as you did with your cotton line, through repeated lessons before mounting him; then when you are on his back do the same thing until he carries his head in the desired position and never attempts to "hog" upon the bit.

This should give the horse a large measure of that suppleness of the neck and jaw which will make him satisfactory to ride. With this point gained, the rest will come (at least in sufficient degree for ordinary use) through practice, if he is ridden habitually and handled with constant reference to what you desire.

What Bit Shall be Used?

Of course this perpendicular position of the head can be more easily maintained by the use of the curb bit, and if the rider prefers it there is certainly no objection to its use. Saddle-horses are usually provided with a bridle having both snaffle and curb, and such a bridle is a good one. I have mentioned the exclusive

use of the snaffle because, personally, I have found it more convenient for such riding as the farmer ordinarily does, over his farm, or to the post-office or store. When the curb-and-snaffle bridle is used it should have its curb and snaffle bits entirely separate, so that either may be used independent of the other.

Most riders prefer that the horse be trained to guide by the pressure of the rein upon his neck rather than by pulling upon the bit in the direction he is to go, as in harness. This is easily taught the horse by crossing the reins under his neck, as thus the pressure upon his neck and the pulling upon his bit both tend in the same direction. In a little while and by using a little "horse sense" the reins can be again used in the ordinary way and the same result obtained, the horse very soon learning what is meant by the pressure of the reins against his neck. It is very convenient to have one's riding-horse guide in this way, but, as the farmer's riding-horse is generally used, it is by no means essential. The matter is so simple that it is wholly at the option of the rider whether he teach it or not.

As to the saddle. The so-called English saddle, the Mexican saddle and the army saddle are all good and may be used according to the preference of the rider. I trust I may be pardoned for saying that of all these

kinds of saddles the army saddle is surely the best and the easiest for the horse, and, in my opinion, the most satisfactory saddle for those who have much riding to do. Moreover its freedom from padding makes it easy to take care of, while its openness at the top prevents it from ever bruising the top of the back.

It will, I trust, be understood that the instructions that I have here given are not by any means for the thorough training of the perfect saddle-horse, but merely for the better adaptation of such horses as hundreds of farmers own to their occasional use under the saddle. That these instructions will work the desired end and make any sure-footed and active horse pleasant and satisfactory to ride can be easily proved to the satisfaction of anyone who will make the attempt.



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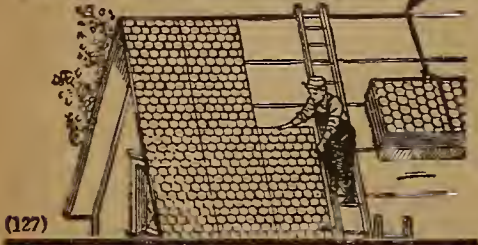
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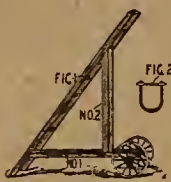
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The Headwork Shop

Handy Kinks That Have Saved Time and Labor

Ladder on Wheels



THIS is a side view of an orchard ladder that is easily moved from tree to tree and that will not tip over. First take a pair of old buggy wheels and axle and bolt on two pieces (No. 1) with the clamps shown in Fig. 2. A blacksmith will make these for a few cents. These pieces should be two by four inches by seven and one-half feet and should be placed a little farther apart than the width of the ladder. Next take two pieces (No. 2) two by four inches by eight and one-half feet and bolt to pieces No. 1 about one third the distance from the wheel end for the uprights, and bolt the ladder in place so that No. 1 will be horizontal and No. 2 will be perfectly perpendicular.

This is for a twelve-foot ladder. For other lengths of ladder the sticks No. 1 and No. 2 should be proportionately longer. While designed especially for orchard use, this is handy for many other purposes.

E. J. WEHLIN.

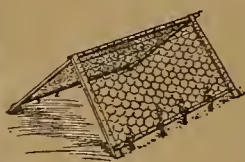
An Emergency Funnel



CUT the corner from a stout pasteboard box, and place box on jug or bottle. This is a strong and practical funnel when a regular funnel cannot be had. I have used it time and time again. Of course all the work which may be expected of the trade funnel cannot be secured from this improvised funnel, but it has come in handy for me many times, notwithstanding.

R. H. WORKMAN.

Trellis of Woven Wire



A SIMPLE yet compact and durable trellis can be easily made of one piece of woven wire and a few two-by-fours or poles as illustrated.

The trellis is put together with a spike serving as a hinge at the end of the apex so that it can be folded up and stored away. Poultry-netting can be substituted for the woven wire for the smaller size of trellis. This form of trellis has been successfully made eight feet high. It is portable and adjustable.

A. B. BROWN.

Restoring Hard Paint-Brushes

AFTER using a paint-brush, putting it aside in water is probably the best way of preserving its usefulness. But as "out of sight is very apt to be out of mind," probably when we again need the brush we find it dry and hard.

To soak it in oil while in this condition is useless. The best use for oil would have been to put it on top of the water to prevent evaporation. Instead of throwing the brush away, tap the bristles gently with a light hammer, turning the brush while hammering so that all sides receive the pounding.

It will soon become flexible, and the outside bristles may be scraped with a dull knife to remove any roughness caused by the hardened paint. Occasionally it may be advisable to remove the outward layer of bristles. But if the brush was washed with oil or turpentine before it was put in water, or the paint well worked out of it, the outer cutting will not be necessary.

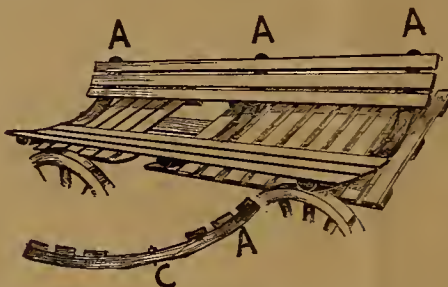
After hammering and scraping, soak or wash the brush in oil, and for all practical purposes it will be found almost as good as new.

C. N. BUCK.

Back-to-Nature Hay-Rack

A HAY-RACK which has the good points of a flat rack and a V-shaped rack combined can be made in the following manner:

Procure three curved poles (AAA); cedar is good. Large branches will do, but the curved trunks of trees are better. Flatten the middle of the pole on the convex side (C), and bolt to a flat bed made of three two-by-sixes with inch boards for crosspieces. The front curved arm should



curve slightly more than the middle and the back arms, in order to allow the front wheels to turn under it. Suitable standards can be built at front and back if desired. The particular advantages of this form of rack are the ease with which it can be handled and the small space required for storing. A load on this rack settles firmly in the middle and rides well on hilly land and rough roads.

R. B. GREEN.

For Handling the Sickle-Bar



HERE is a handy device for handling a sickle-bar while grinding it that relieves the heavy strain on your arms. Hang a strong swivel pulley on any beam or tree-limb just over the grindstone. Run a rope through pulley and fasten to each end of sickle-bar so as to hold sickle-bar at the best height to grind easily. All weight is taken off your arms, and you are free to devote all your effort to a first-class job of grinding.

J. C. MUNDELL.

Headwork Winner

The first-prize contribution in the Headwork Shop in this issue is, "Trellis of Woven Wire," by A. B. Brown.

What Will the Farmer Do Then?

DID the reader ever think what a clumsy process this is by which we feed the world? Every bit of food we produce has to go around Robin Hood's barn and back to get from the soil to the stomach. All our animal food must first be taken from soil and air by plants, then worked over in the bodies of animals into food for us.

And yet we know pretty nearly what food is—protein, carbohydrates and fats. Most of us are now aware, however, that all these things, which farmers make by going round Robin Hood's barn through the assistance of plants and animals, either themselves or substitutes for them can be made directly by chemists.

What the Chemist Can Do

The fat we so carefully place on our cattle and swine can be made by a chemist out of glycerine and the right fatty acid. Glycerine and the fatty acids can be made in factories, but they are very costly as yet. Protein has always stumped the chemists, but they are working on it. A German doctor, however, has found out that Nature really does a lot of seemingly unnecessary work in making protein for our stomachs; that the stomach, in fact, has to undo a good deal of this work, and turn the protein back into amino acids which are simpler than protein, and can be made in the laboratory or the factory. Eight or ten kinds of amino acids might be fed to a customer in any "synthetic" restaurant in-

stead of a beefsteak—and they will do the customer quite as much good if he can only be convinced of it.

Artificial sugar was made years ago. But the sugar-cane plant, the sugar maple, the sugar beet and other natural carbohydrate producers can beat the chemist because they have in their leaves that green substance called chlorophyll. When the chemist can find something which will do the work of chlorophyll, he can make sugar without any help from the farmer.

Price of Farm Lands Not Affected

The farmers of India were put out of the indigo business by chemical indigo. Margarine is not synthetic butter, but it illustrates the effect a factory product has on a natural product when the chemist finds the secret. It is quite possible now for a chemist to make in his laboratory a balanced ration for human beings from things with the production of which the farmer has had nothing at all to do. He can serve to his customers artificial glucose, a carbohydrate; artificial fats made of artificial glycerine and fatty acids; and instead of protein artificial amino acids of the sort which the stomach wants.

However, let's not worry. When chemistry brings on its synthetic dinner, the farmer will no doubt be there to partake. For the present the price of farm land will not be affected. The synthetic foods are very costly—but so was synthetic indigo, once, and so was margarine!



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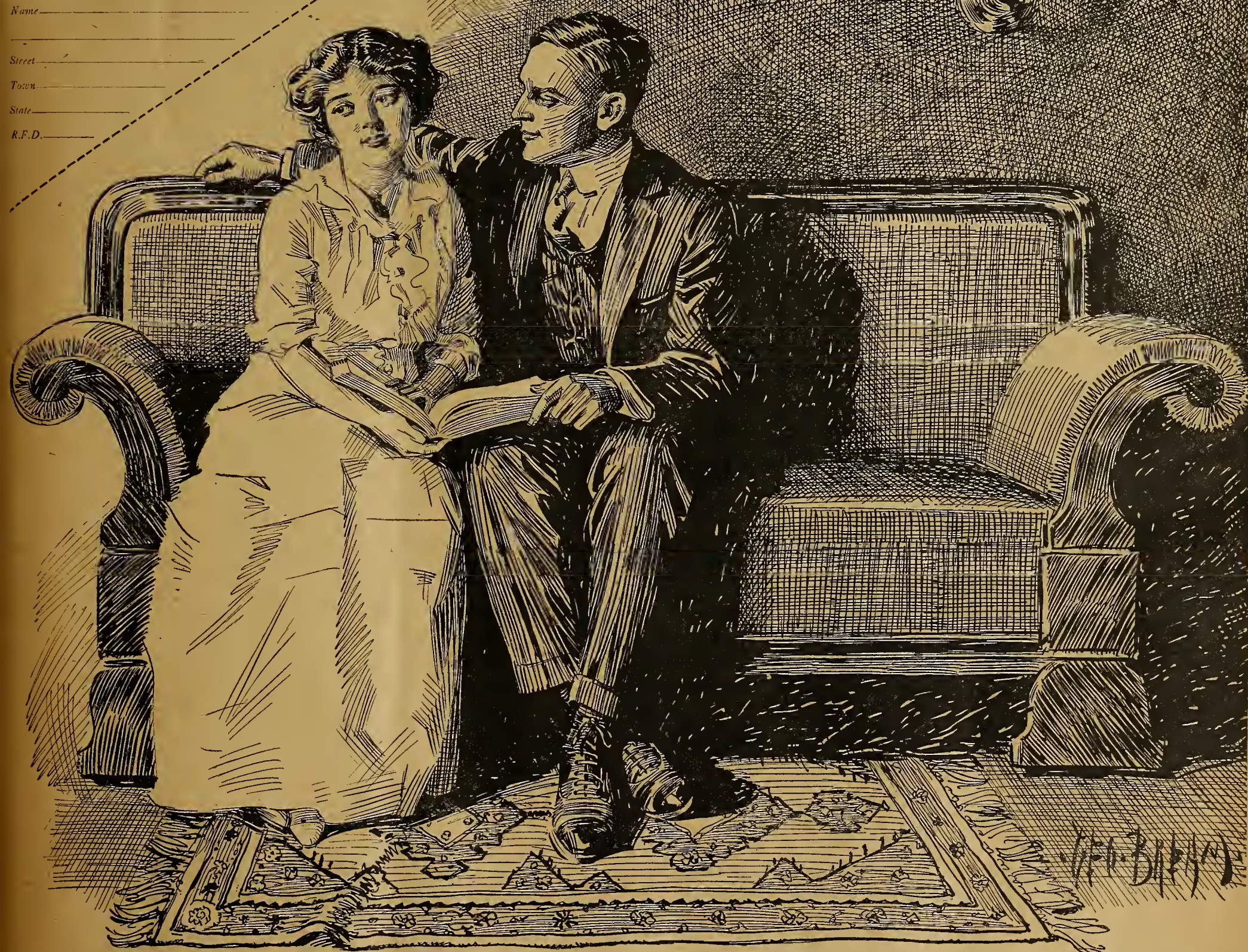
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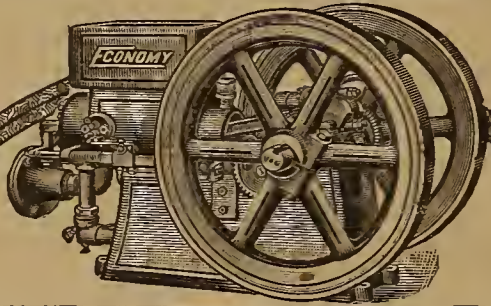
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Crops and Soils

Deep Plowing Arguments

"There's a Reason"

By James A. King

THERE is always considerable discussion regarding the relative merits of deep and shallow plowing. Of course no set hard and fast rule will apply. "What is one man's meat may be another man's poison" is a saying that may well apply to this subject of plowing. The proper depth to which a man should set his plow will depend to considerable extent on many things. Is it fall or spring plowing, or plowing for summer fallowing? Is it sod or stubble? What is to be planted? What is the nature and depth of the surface soil? How deep has the ground ever been plowed before, and how long ago was that?

All these things should be given serious consideration before a furrow is turned. Oftentimes the decision will make or ruin a crop. At the very least it is almost certain to have a very material effect on the amount of yield one gets.

You've Met This Question This Year

Last year my correspondence brought me in touch with the views and experiences of many men in many sections of the country from Massachusetts on the east to the Pacific Coast on the west; and from San Antonio, Texas, on the south to Prince Albert, Saskatchewan, on the north. I was impressed with the fact that most of these men, who were careful, thoughtful and successful farmers, favored at least moderately deep plowing of six to eight inches, especially for fall plowing. Quite a number favored very deep plowing of fourteen to fifteen inches. A small minority argued in favor of shallow plowing; some of them for all cases, others only when breaking sod.

One interesting feature was brought out with relation to parts of the Dakotas and other sections with similar soil and climatic conditions. These sections often have very dry summers; in some cases even very severe droughts. But over vast areas there is an abundance of water only a few feet below the surface of the ground. For years the average man had plowed to a certain uniform depth, about four and one-half to five inches. When plowing when the ground was dry, as was often the case with fall plowing, the bottom of the furrow would be polished. And there seemed to be a crust at this point that a plow-nose could scarcely be forced through.

Some observant men investigated what was below this. They found that after getting below this crust the soil was well filled with moisture, while above it was bone dry. Between these two extreme conditions was this hard layer. It seems that continuous plowing year after year to this same depth, and much of the time with a dull share, as many people do, had sort of packed the bottom of the furrow. Below, the soil was firm; above, it was more or less mellow and open. As the moisture from below was drawn up through the capillaries of the subsoil by the sun and the wind, it evaporated when it reached this point. It dropped what mineral salts it may have contained in solution. This naturally added considerable to the hardness of this layer. It also made it more and more difficult each year for rain-water or plant-roots to go down through the layer, or for moisture from the subsoil to be drawn up during seasons of no rain.

The Part That Moisture Plays

Some men took a lesson from these observations, plowed so deep that they got below this hard layer in their old ground and broke it up. They disked thoroughly and deeply to mix the old surface soil with this newer soil from the greater depth. Thus good water connection was established between the surface soil and the abundant supply in the subsoil. I am told that in those sections during the past dry seasons a field of grain on deep plowing would show a luxuriant growth and large yield when an adjoining field where the old shallow plowing had been done would scarcely be worth the cutting.

In the corn belt there is not much plowing done for oats and other small grains. But throughout the small grain regions of the country it is the most common practice. It is probable that three and four inch plowing is more common in these regions than it is in the corn belt. For this reason I was especially interested in an incident reported by one of my correspondents from Mayoworth, Wyoming. From his letter, which dealt with other things as well, I quote the following just as it was written.

I will give you an example of what deep plowing will do for the man who irrigates. A man plowed a field of alfalfa with a sixteen-inch plow as deep as he could well run it and followed in the bottom of this furrow with a twelve-inch plow, rigged so it would plow about six inches below the bottom of the other furrow. He then disked his

Farm and Fireside, October 11, 1913

ground up well and drilled in seventy-five pounds of oats to the acre. He then cross-drilled the same amount in. He irrigated twice and thrashed one hundred and seventy bushels of oats to the acre, and the oats weighed forty-eight pounds per bushel. Deep tilling has begun to appeal very strongly to the western farmer. Deep tilling with horses is not a howling success.

There is the rub. The fact that it is such hard work, when plowing is already the hardest job the farm horse has to do, is probably the greatest reason why so little really deep plowing is done. But one can rest assured of this thing. If genuine deep plowing is done at least every second or third year, with proper regard having been paid to the character of the surface and subsoil and to the other naturally accompanying problems, the additional yield will pay a big premium on the additional labor put into the job.

Spotted Alfalfa Fields

FIELDS of alfalfa, especially in the East, are often found uneven and spotted from some varying condition in the soil. If the unthrifty spots are moister underneath than the other land, the cause is probably lack of drainage. Where the drainage is equally good all over the field, and there are spots which look spindling, yellow and unthrifty, the cause is probably acidity of the soil in the poor spots. These spots may be successfully treated by liming, but it is usually better in such cases to lime the whole field, rather than to try to even the conditions up. Spread on from three thousand to four thousand pounds of ground limestone, or half as much of air-slaked quick lime per acre. Resow to alfalfa.

Under ordinary conditions the silo will make a profit of \$175 in feeding forty steers for ninety days, over a feed of corn stover and fodder—the silage being made from the same amount of corn as the stover and fodder. This is certainly good profits from the amount of money it takes to build the silo. The test was made in Wisconsin, but it is equally good wherever cattle are fattened on corn.

Results with Kafir-Corn

By C. Bolles

THOUGH more or less of a novelty in the East, Kafir-corn is coming to be the staple crop in the Middle West where the seasons are long enough to mature it. From July 1, 1912, to March 1, 1913, 331 cars of Kafir-corn were inspected in Chicago. Most of this was used for making poultry-food, the three largest manufacturers using an average of about 20,000,000 pounds a month. This year the yield is so much greater that the poultry manufacturing trade cannot use the entire crop, and concerns making various mixed feeds will become users of it.

Kansas and Oklahoma are the principal Kafir-growing States, but Texas comes in for some recognition, as do also parts of New Mexico and Colorado. It is probable that with further selection of the present varieties Kafir can be profitably grown both farther north and east. The black-hulled white and the dwarf black-hulled are the principal varieties.

Kafir finds its greatest use on the farm where grown when it is fed to the horses and hogs in the head or, if thrashed and ground, to all the stock. With the use of combination grinders, Kafir can be ground in the head and thus fed without thrashing. In any case it has to be balanced with a protein feed, like cottonseed-meal, to give the best results. In some cases Kafir has been hogged down with good results, but milo, its side partner, is better for this purpose.

Kafir is the one crop that the farmer in the drier parts of the West can plant and be assured that he can use whether it matures or not. It may be cut for forage after frost and still be good feed, and if it does not seed the fodder is still good. We have known farmers to plant Kafir for fodder where they had no hope of getting seed, and they felt they had the best feed they could possibly grow. Many farmers prefer Kafir fodder to alfalfa for horses and cows. We have known horses to do their spring and summer work on Kafir fodder and come through in fairly good condition.

Kafir can be ground into excellent flour for making pancakes, muffins, doughnuts and pastry.

It can also be popped like corn and can be substituted for wheat in producing "as-good-as-coffee" drinks.

Conditions at one time got so bad down in southern Kansas that one of the bankers began writing a clause in his mortgage with the farmers requiring them to grow ten acres of Kafir for every hundred dollars they borrowed. The scheme benefited both parties, and the idea spread until most of the banks of southern Kansas and Oklahoma have taken up the idea, though with various modifications. This has had the effect of placing the banks on a higher financial plane, and the farmers do not have to tie up all their live stock in order to borrow a few dollars.



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Normally Kafir requires a four-months' growing season; but with the dwarf variety this period has been shortened fully two weeks, thus placing it in the same class with the dwarf milos. Since we have had few normal seasons, those having just a four-months' growing period will not always mature it. Such was our own case last year here in Nebraska, while the same variety planted May 25th at Hays, Kansas, was ripe by September 25th, the time of both our and their first frost. It will be possible through selection from early-maturing heads of this strain to produce an improved variety that will become ripe in the average year as far north as central Nebraska. The standard variety grows to a height of six or seven feet, the dwarf to but four. The yield of the dwarf has been improved, but of course the forage per acre lessened. However, the leaf area has not been cut down very much.

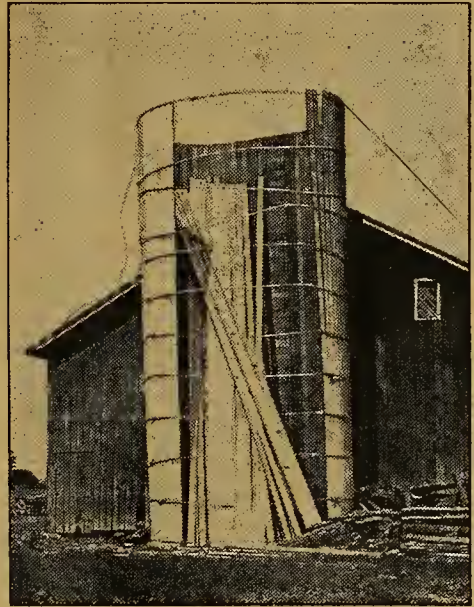
The farmers of Oklahoma are looking in the right direction and getting down to the place where land that will not raise an average of twenty-five bushels one year after another cannot be called corn land but had better be tried for Kafir. This spirit of really making the farm pay expenses has awakened influential men into giving equal prizes at the various fairs, for both corn and Kafir. The highest yield reported last year in Oklahoma was one hundred and twenty-five bushels.

Loose Hoops Did This

By Alonzo Price

THE foundation for the silo shown in the picture was made by digging a trench fifteen inches deep and filling with stones, broken rocks and concrete. The soil was a tough clay that was very firm at fifteen inches deep. The foundation extended about nine inches above ground.

There were three couplings to each hoop. About one and one-half inches of the thread were used when the silo was built, leaving



Too late to tighten the hoops

about five inches of thread to be tightened when needed. The staves were of second-grade fir in one piece, the size of silo being sixteen by thirty-two feet. The cost, including labor, was two hundred and fifty dollars.

This silo was built in the fall of 1912 and filled a few days after being completed. The hoops began to loosen at the top before the last of the silage was fed. The hoops then loosened so that some of them sagged considerably before the staves fell in.

The owner considered that tightening the hoops was unnecessary. The silo was well braced with guy ropes, and he thought it would stand.

Wisconsin farmers are enthusiastic at the results of using beet tops with shock corn for silage. Where beet tops are thrown away a great saving is here shown to be possible. By using shock corn it can be put in when the beets are topped.



Michigan, as well as other Northern States, can get one hundred bushels of corn per acre. This field is a testimony to that fact. Twenty-five acres in the field and 2,500 bushels the yield

Side Lights on the Use of Humus

By R. E. Hodges

DOES a fruit-tree get nourishment from the subsoil? Try scraping the top soil from a small patch and planting a garden on it. I say "small," for it is not necessary to waste a lot of space or time. Available plant-food is usually found only near the surface, where air, sunshine and fresh rains have worked on the soil, and where plants have decayed to make humus.

A tree sends its roots deep chiefly for water, not for food. The feeding rootlets are near the surface; and unless the surface soil has the food elements in available form, plus the humus, the crop will be less than it should be.

The Minnesota Experiment Station found that soils containing five per cent. of humus hold twenty per cent. more water, and lose it less rapidly in dry weather than those containing three per cent. of humus. Of the soil with five per cent. humus, .06 to .08 per cent. is phosphoric acid, soluble and associated with the humus, while in the soil with three per cent. of humus only .02 per cent. of phosphoric acid is found. This leads them to believe that humus is an active agent in making that acid soluble.

If the soil is exhausted by repeated cropping, potash and phosphoric acid must be supplied from distant sources. But nitrogen and humus may be grown on the field where they are to be used.

A farmer of my acquaintance had a young orchard planted to peaches. Nodules formed on the pea-roots and fixed the nitrogen from the air in available form for the trees in the coming years. The crop was sold to the cannery at present to pay for the use of the land, and this much fertility was lost.

But the vines were plowed under as soon as picking was finished. This furnished the humus needed to conserve moisture through the dry summer, while the nodules supplied the element most used by the trees and the most expensive to buy, nitrogen. Get your nitrogen in this way.

Plan to Prevent Washing

By J. O. Claitor

THE best plan to keep rolling land from washing is to have the rows properly laid out with a bevel, and in flat-breaking the field always plow the land in beds or lands two or three rows wide, instead of taking larger lands or the whole field as so many do. This plan does not cause little gullies to start about over the field, because there is a good drain furrow every second or third row.

This is better than bedding each row to itself for such crops as corn and cotton, because the drainage is good, and at the same time the crop can be planted on a level. Planting on a level makes the crop easier to work and keep in good shape than if planted on high beds. Oats and other crops of like nature succeed best when the lands are only two or three rows wide. I don't know the value of this method of plowing up North, but here in Mississippi the rainfall is heavy and makes it a necessity. Leaf-mold from the woods makes fine fertilizer for any crop, but is especially fine for garden stuff.

The Man and the Ox

By Ramsey Benson

A MAN envied an Ox his contentment. "Teach me, O happy beast, your philosophy!" he cried.

The Ox was so astounded that he stopped chewing his cud. "My philosophy!" he repeated.

"Your philosophy—the body of principles, you know, by which you order your thoughts and guide your conduct."

The Ox shook his head. "I'm afraid I haven't any!" quoth he.

They are often the happiest who do not bother themselves to discover why they are so.

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That Coffee Was Causing Her Trouble

So common is the use of coffee as a beverage, many do not know that it is the cause of many obscure ails which are often attributed to other things.

The easiest way to find out for oneself is to quit the coffee for a while, at least, and note results. A Virginia lady found out in this way, and also learned of a new beverage that is wholesome as well as pleasant to drink. She writes:

"I am 40 years old and all my life, up to a year and a half ago, I had been a coffee drinker.

"Dyspepsia, severe headaches and heart weakness made me feel sometimes as though I was about to die. After drinking a cup or two of hot coffee, my heart would go like a clock without a pendulum. At other times it would almost stop and I was so nervous I did not like to be alone.

"If I took a walk for exercise, as soon as I was out of sight of the house I'd feel as if I was sinking and this would frighten me terribly. My limbs would utterly refuse to support me, and the pity of it all was, I did not know that coffee was causing the trouble.

"Reading in the papers that many persons were relieved of such ailments by leaving off coffee and drinking Postum, I got my husband to bring home a package. We made it according to directions and I liked the first cup. Its rich, snappy flavor was delicious.

"I have been using Postum about eighteen months and to my great joy, digestion is good, my nerves and heart are all right, in fact, I am a well woman once more, thanks to Postum."

Name given by Postum Co., Battle Creek, Mich. Write for copy of the little book, "The Road to Wellville."

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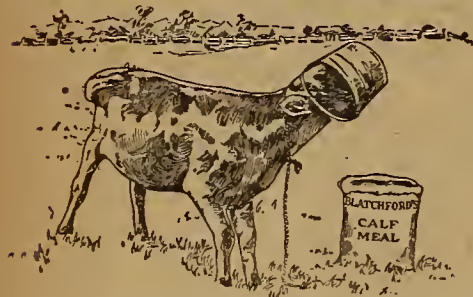
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Live Stock and Dairy

What Veterinarians See

By Dr. D. P. Devine

HAVING been a subscriber to FARM AND FIRESIDE ever since I began farming for myself, I would like to make a few suggestions to my farm friends.

Since I have been in veterinary practice and away from my own farm considerably, I have observed to some extent the various ideas, knowledge, ignorance and management of farmers and stock-owners with whom I have come in contact.

I have been called in by a dairyman who had milked a good cow up to calving-time, and by a farmer who had worked a mare until foaling-time and had no idea when to expect the new-born. These people wondered why they had such poor luck and such stunted calves or colts.

Or sometimes one of these economizing fellows stops feeding when he stops working a mare, and turns her into the yard a few months prior to colt-time. This last man's economy on feed falls short in balancing up on his stunted colts. I also see this man's farming implements out in the field all winter, really getting only one year's good use of them, when by building a tool-house at a cost of fifteen or twenty dollars he would often save fifty dollars in tools or implements each year.

I can safely state that one fourth of all pigs littered are chilled to death or killed the first week of life, due mainly to unsuitable pens or protection.

The Wire-Cut Colt

There is fully as large a proportion of horses disfigured by barb-wire cuts, some so badly as to cause lameness, and the farmer sells for twenty-five to forty dollars less than actual value for such animals, as there is danger that most of the animals will develop lameness. His fears are well founded, as the veterinarian examining such animals frequently finds exostosis formation, due to such injury. How often have I heard the owner remark, while I was examining such animals, that the colt was let out for a run. Yes, and he always runs into a tangled mass of old wire or a hotbed sash, when both should have been out of the way, or the colt turned into a field that was clear of such things.

From the bad conformation of animals, I think there is entirely too much inbreeding, or close breeding, of horses. I can readily see it in the army, where horses from all sections of the country are put together.

I have now under observation two cows whose udders were badly cut on barbed wire; one may recover, the other had better be slaughtered.

Infection from Dirty Yards

Just look at the balky horses, made so by the man breaking them, the farmer. A great mistake is to place too great a load on the animal in the beginning. A colt should be handled carefully, and loads gradually increased.

Ignorance is also displayed by horse and stock men in general in administering medicines and treatment. Never drench a horse in the nose or the ear, and do not administer medicine unless you know its therapeutic value and indications.

I was once called to see a colt that was acting in a peculiar manner, about a week after castration. I found the animal had lockjaw. Just as I arrived the owner and his help were wrestling with another colt in his back yard, with the manure six inches or more in depth. There were also some old doors lying around, with tenpenny nails sticking through, sharp points up. The colt in its struggles threw its head on one of these nails, piercing the eyeball until the vitreous humor escaped. This will cause loss of the eye, if the colt does not die from lockjaw. This man had lost four colts in three weeks from lockjaw.

Some Foolish Quack Treatments

A quack horse-doctor told me that he could cure lockjaw if he could get the animal to take a plug of tobacco, but, dear reader, an animal with lockjaw cannot swallow.

I was also informed by this same "doctor" that when an animal had diarrhea the remedy was to tie a string around the tail, and, really, people for miles around would bring their animals to him to have that string tied on—any old string would do!

One large ranch-owner of the Southwest followed a treatment for lockjaw suggested by one of his kind neighbors. It was to place a board on the animal's forehead and strike a good blow with an ordinary ax. Well, the horse moved his head a little, and the blow hit the animal just between the eyes.

One notable fact is that most people who try all sorts of treatment for their sick stock do not take a farm paper or do not take time to read one if it comes to the house. Many a good animal could be

saved if the farmer would take one or two hours a week to read a good farm paper.

Dear farmer friend, don't try all the remedies of the neighborhood on your sick animals, but get a graduate veterinarian, licensed to practice. It is also a good plan to keep some reliable colic remedy and good lotions or ointments on hand.

An Ohio man who keeps six hundred hogs carries over only about twenty old brood-sows. These are those which have shown themselves the very best and most prolific mothers. All the rest of his pigs are from young sows, which have but the one litter, and then are fattened and sold. Just when does it pay to carry over old sows? Who has any bedrock facts on this?

Cream-Grading

ON THE other side of the earth—in Victoria, one of the provinces of Australia, the agitation for the grading of cream has begun. The Department of Agriculture wants the Government to pass a law making the grading of cream compulsory. Managers of butter factories and cream-graders are to be compelled to take out licenses, and if their grading of cream is not correct the licenses are to be taken away. Cream-grading is coming in this country sooner or later. It is folly to call dirty cream carrying a certain per cent. of butter-fat as valuable as clean cream equally rich.

The Billion-Dollar Tick

THE cattle-tick is a little fellow, but he makes his mark in the leather business and otherwise. Some brand-new facts show that one infested State (Tennessee) has practically freed her entire area from this baleful parasite, and is already the gainer by the sum of over three million dollars by freeing a half million head of cattle at an average cost of sixty cents per head.

A tick-free animal kept for beef or dairy purposes is worth, as an initial investment, seven dollars more than one remaining infested; and when the animal comes to the block there is an additional difference of \$1.26 in the hide value, as demonstrated in the leather trade.

The tick, in abstracting his bloody banquet from his host, leaves puncture-marks in the hide, which when converted into leather will not furnish the popular "chrome" stock which is in such demand.

The qualities desired—fine grain and close texture—are peculiar to southern hides. Larger supplies of high-grade leather, or an adequate substitute, must soon be forthcoming, or the alternative is a bare-foot Nation.

Our great southern territory, including the major portion of fifteen States, has been held back from its rightful heritage of prosperity for generations an account of the insidious activity of the cattle-tick. A billion dollars each decade will not measure the loss that must be charged up to the tick in the territory affected.

What Tennessee has practically completed in tick-eradication under the direction of the United States Department of Agriculture is being more slowly accomplished in most of the tick-infested States, and the end of the reign of this mighty mite is at hand. The battle has been won by the simple practice of dipping at intervals all affected stock in conjunction with systematic quarantine regulations.

New Remedy for Abortion

THE veterinarian of the Vermont Experiment Station, F. A. Rich, has, after a fifteen-years' study of infectious bovine abortion, found that methylene-blue is the best remedy thus far proposed to stop the ravages of that disease. Wherever the dairy industry exists that disease is present. Over one per cent. of Vermont cows are infected with it, which means 3,500 less living calves born annually in Vermont; and that State is but a speck on the map.

Do not confuse methyl-blue with methylene-blue, which is an entirely different thing chemically, even though the names are similar.

The dose is given in capsule form introduced into the throat with a balling-gun. Only the chemically pure methylene-blue should be used. The cost of a single dose is ten cents, making a week's treatment cost seventy cents per cow.

This treatment is from twenty to fifty times more effective than carbolic acid, which heretofore has been considered the best remedy.

Of ninety-two cows known to have the disease, and which have been treated during the last eight and one-half months, only one of the fifty-six that have calves has aborted. The remainder have not yet calved.

Arsenic for the Tick

IN ONE month during the past summer over a half-million cattle were dipped (treated for ticks) in three States—Alabama, Tennessee and Mississippi. One county (Holmes) in Mississippi maintains 185 dipping vats. The cattle were all dipped in the standard arsenical solution approved by the U. S. Department of Agriculture.



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Poultry-Raising

Scratching Out the Dollars

By Chesla Sherlock

A NECESSITY for every good hen-house in the country is the scratching-shed. To many, however, the scratching-shed is an entirely new idea.

Shortly after the introduction of the idea of utilizing the floor space for the hens during bad weather there was considerable comment as to its "practicality." Would it survive the test of time? Would it win favor?

Turkeys should have a constant supply of pure water. If the turkeys take regular trips to some near-by grain-field they should not be fed very heavily in the evening while the weather is still mild. Turkeys seem to like whole corn better than any other grain, but they will eat almost any kind, even spoiled grain that is almost rotten.

Overfeeding is one cause of bowel trouble in turkeys. They will eat corn until their crops are packed. If they continue this long, without any other feed and not enough grit, both indigestion and liver disease will set in.

I think it is best to feed the turkeys regularly, but not too heavily, morning and evening, while they still have free range. A varied ration gives best results. When the weather gets cooler and frost begins to show in the early mornings, then the corn ration can safely be increased.



To many the scratching-shed may be a new idea, but it's a good one

We know of no single appliance or article that has been given to the poultry world that is as essential, as practical or as beneficial, both to fowl and man, as the scratching-shed. It would not be overestimating it in the least to say that it is the greatest thing ever offered; it is the stepping-stone from old ideas to twentieth-century methods; it makes possible the great commercial farms that are in operation to-day, and it makes possible the keeping of poultry on a limited plot of ground.

The illustration with this statement shows a small scratching-shed on the farm of W. F. Long, an up-to-date Iowa farmer. Mr. Long believes in keeping up with the times even if forced to construct a temporary structure like the one shown.

This scratching-shed is built of waste material and is of the shed-roof type. It joins the hen-house on the east. It is twenty feet long and eight feet wide. This shed is divided into two separate pens, one of which is used during the early spring months in starting the young chicks. It is also utilized as a place for setting hens and is very convenient. Since it is built of waste lumber, Mr. Long estimates that it cost nothing. However, a little time was consumed in its erection, but this was done when other work was not heavy. There is enough waste lumber on most farms to build such a house.

Give the Turkeys a Varied Fall Ration

By Anna W. Galligher

DURING the fall and early winter months the growing turkeys should be closely watched, besides this is the time when the so-called "blackhead" is apt to make trouble.

This disease in turkeys is similar to cholera in chickens. However, I believe



The Christmas trade calls for a small bird

that there are very few cases of genuine blackhead, or cholera, among fowls in this country. What is usually called blackhead in turkeys is nothing more or less than chronic indigestion and liver disease, brought on by wrong feeding or lack of exercise. It is not at all unusual for a turkey suffering from indigestion to droop, refuse to eat and then appear to improve a little, mope around for several weeks and then die. In severe cases of indigestion or bowel trouble the turkeys' heads turn black or a pale yellow color. While I have had some success in treating indigestion in turkeys, I find that it is much easier to prevent than to cure.

To begin with, see that there is always a good supply of some kind of sharp grit within reach of the fowls. Both grit and crushed shells are cheap. If they cannot be had, then try broken dishes, crockery, limestone, sandstone and coal-cinders. Charcoal is good for poultry of all kinds, but will not grind their food.

We usually keep the turkeys in a shed, enclosed on one side with poultry-netting, for about two weeks before they are to be sent to market. They are turned out for exercise every two days for an hour or two in the evening.

Whole corn, either dry or boiled, is the usual morning and evening ration, with a mash at noon composed of cooked vegetables, such as potatoes, turnips, beets, pumpkins, cabbage, etc., thickened with corn-meal and bran, with a little powdered charcoal and a little salt added. A level tablespoonful of charcoal and a level teaspoonful of salt for each gallon of the mixture is about right. Twice a week I add a quantity of raw chopped onion.

If there is no suitable house or shed on the premises it is better to let the turkeys have free range than to use a small coop. Turkeys cannot endure close quarters as well as chickens. The house or shed must be clean and dry, with plenty of ventilation. Roosts should not be too high. I never keep turkeys penned longer than fifteen days.

Fireless Brooders for Winter Chickens

By R. E. Hodges

"MY FIRELESS brooders make much stronger chicks, they begin to lay sooner, the mortality is about the same as with my coal-stove and oil-lamp heated brooders, there is far less labor in caring for them, the first cost of brooder-buildings is less, and there is practically no cost for maintenance, because no artificial heat is required," said Otto Wohlers of Sonoma County, California.

He has fine success with all of his brooders. In the fall of 1912 he put 1,500 chicks into the fireless brooders, and in a little over five months the 615 pullets that matured were laying fifty per cent. as many eggs. He sold broilers this past spring, at nine weeks old, for \$5 per dozen.

Of course part of his success is due to judicious feeding, but Mr. Wohlers speaks emphatically of the brooders. He believes that more chickens are killed by overheating



Gilbert Hess
Doctor of Medicine
Doctor Veterinary
Science

Hens can't lay eggs

and grow feathers at the same time

Feather growing saps all the nutrition of a hen's ration. That's why hens practically stop laying eggs when moulting starts. Given their own time to moult, hens take about 100 days within which to shed the old feathers and grow new ones. But that hits your pocketbook hard, because egg prices are away up high in October, November and December. Change your methods to mine. I force my hens to moult early in fall, make them moult quickly and get them back laying again before winter sets in. To do this I rely absolutely on

Dr. Hess Poultry PAN-A-CE-A

Shortens Moulting Period—Makes Them Lay

My hens get this bracing poultry tonic all year round, so that when moulting time comes along they are fit to stand the severe strain. Just before moulting commences I combine the birds for about a week and put them on half rations to reduce the fat. This dries up the quills right to the ends and it only takes an increase in protein and fatty rations to make new feathers and force out the old ones. Back they go then on Pan-a-ce-a—this tones up the egg organs and brings back the scratch and cackle and compels each hen to lay regularly—just when eggs are at their highest price.

My Pan-a-ce-a is a tonic—it makes poultry healthy, makes hens lay, helps chicks grow and shortens moulting period. The result of my 25 years' experience as a doctor of medicine, doctor of veterinary science and successful poultry raiser. Ingredients printed on every package and certified to by the U. S. Dispensary and Medical Colleges. Read this money-back guarantee. You buy Dr. Hess Poultry Pan-a-ce-a of your dealer and feed it according to directions. If it does not do as I claim—if it does not pay you and pay you well, I have authorized your dealer to refund your money. 1 1/2 lbs. 25c; 5 lbs. 60c; 25-lb. pail \$2.50. Except in Canada and the far West. Never sold by peddlers. Send 2c stamp for my brand-new poultry book—it's a stunner.

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Taken off pasture, put on dry feed and closely confined, your stock are apt to get out of fix during winter. Some are liable to get constipated, dropical swellings, stocky legs, but, most common and dreaded of all diseases, especially among hogs is worms—worms. Dr. Hess Stock Tonic will keep your stock toned up, enrich their blood, keep their bowels regular and will rid them of worms. 25-lb. pail \$1.50; 100-lb. sack \$5.00; smaller packages as low as 50c. Except in Canada, the far West and the South.

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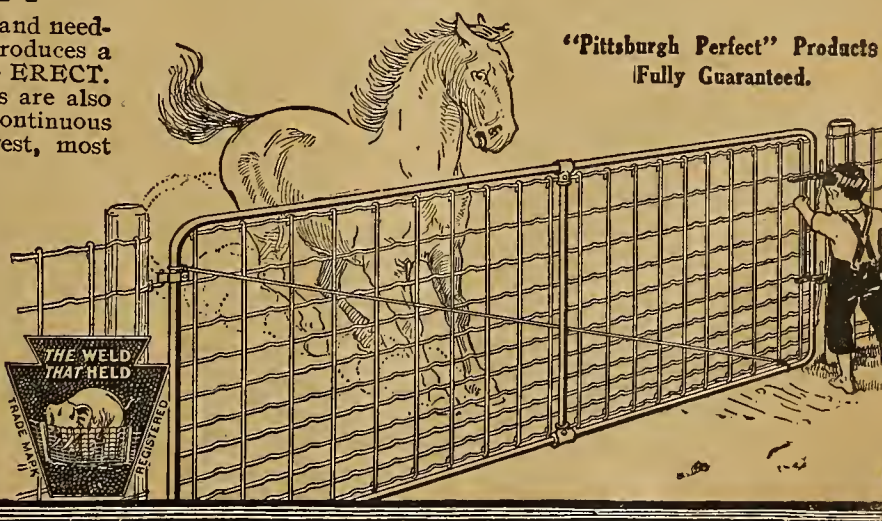
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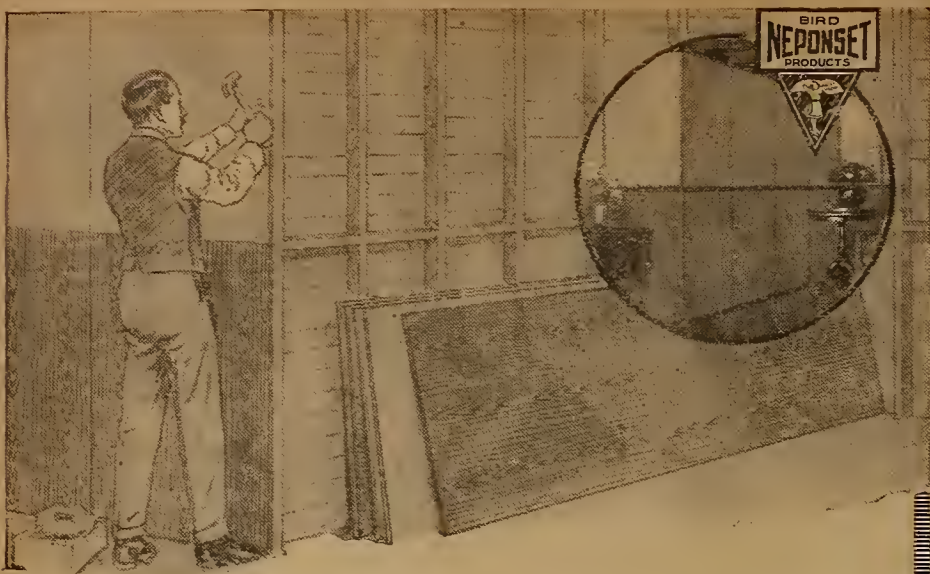
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and overfeeding than by cold and hunger. As an instance, he cites the case of three fireless-brooder chicks that were left outdoors all one night in the wet grass when they were two weeks old. At feeding-time next morning they were busy scratching. Ordinary brooder chicks would have been dead.

His fireless brooders are an outgrowth of a patented one which he bought at first. They are boxes about five feet long, two and one-half feet wide and nine inches high. A brace across the center, raised two inches from the bottom, divides the brooder into two square compartments which may be separated by inserting a two-inch board. Each half is covered by a lid which is held on little temporary blocks at just the height to allow the chicks to stand under it. As they grow, the lid is raised. Strips of felt, an inch wide and ten inches long, are fastened all over the under side of the lid to hang down among the chicks. Crowding is thus very difficult, and the heat is retained. The back wall is double, with an inch space for ventilation. The inside board is about two and one-half inches high, while the outside one comes down from the top of the box within about two inches of the floor. This permits fresh air without having any draft on the chickens. The entrance in front is two inches by sixteen. This has been found better than two smaller entrances, for there was often a crush at one, while the other was empty.

That this system is consistently good is shown by another hatch, of 1,560 chicks, of which forty per cent. were roosters, and from which 745 pullets were raised. Most of our poultrymen feel well repaid if eighty per cent. of their chicks mature.

To Prevent Dry Mash Waste

By L. H. Cobb



FEEDING dry mash to laying hens is recognized as necessary to obtain best results, but the waste that attends has prevented many from trying it. Hens will jerk the feed over the front of the box in getting the particles they want. The box illustrated saves this.

There is a compartment beneath the feed-box and an inch space between the side of this compartment and the feed-box in front. Mash jerked from the feed-box drops into this compartment and can be removed and returned to the feed-box by dropping the hinged front.

A Chicken-Pox Experience

By A. E. Vandervort

THOUSANDS of chickens died last winter from chicken-pox, roup and canker. The weather was bad for these diseases, and I had more trouble with them than in several years. I found several very bad cases of roup that seemed to develop into canker and chicken-pox.

I lost about one every day until ten were dead. I burned sulphur in the coops and gave the interiors a good cleaning with air-slaked lime. Well, their eyes swelled up as well as their tongues. Foul matter formed in their mouths and throats, and I could hear them wheezing.

First one eye commenced to get watery and swell. This is the time when you want to get right after it, or you will have trouble. Take a quarter of a teaspoonful of half hydrogen peroxide and half water and give internally. Take another quarter of a teaspoonful and put it in the eye and nostrils. Keep this up for three or four days until you notice an improvement.

Avoid the Feeding of Whole Grain

They will not want to eat, but will become very thirsty. Take one gallon of water, put in ten drops of creolin and one sixteenth of a teaspoonful of permanganate of potash for those that have the disease. Give them all the raw onions they will eat, cutting the onions up into small pieces. Feed mashes (whole grain irritates their throats) and keep the sick birds away from the others.

When you have a very bad case of chicken-pox or canker, take a wing-feather, strip it of fluff except at the end and dip the feather in the bottle of creolin. Then paint the creolin on the throat, roof of mouth and tongue of the sick bird, placing a few drops in the nostrils. If there are any lumps on the face or comb remove the scabs and paint the raw tissues with creolin. Keep the sick birds in a dry place.

Sometimes you can cure a mild case with coal-oil. Inject it into the nostrils, eyes and throat. Watch your flock closely; watch their eyes; you can pick out the sick ones in a minute. Don't let the disease get started. I have not lost one since I have been watching the birds carefully, but it is contagious and will surely go over the whole flock if you do not remove those affected.

Some take it in a bad form, and others only have a light attack. Put a teaspoonful of permanganate of potash crystals in every three gallons of drinking-water for the birds that are not affected. Give them all the onions they will eat. That is the way I prevented the disease from killing off all my birds.

I have had considerable experience in poultry diseases, but these diseases in a severe form are the worst I ever handled. Watch your birds' eyes every day.

Chicks That Laid in the Spring



A PREJUDICE will always exist against setting hens in the fall. It is the unusual thing to do, probably because it is harder to raise chickens hatched in the fall than in spring.

This is how a New Hampshire poultryman accomplished the task of raising, without artificial heat, all of twelve chicks hatched on October 1, 1912. He constructed what he called a "hen brooder," which was nothing more than a long, rectangular box on legs as illustrated. There are no partitions inside, but in one end a nest of hay was made, and the rest of the floor was covered with sawdust to the depth of one inch. October last year in New Hampshire was marked by cold nights and sunny days. The chicks were kept in their box the first ten days, and after that were allowed to run at large with the hen, which was a careful mother.

One half of the top of the hen brooder was permanently covered with boards, but the other half was provided with a removable wire panel which when removed permitted the chicks to have access to the brooder by means of an inclined board. They invariably flew down, and sturdily climbed their board as if trained to do so whenever the hen flew up to the brooder at night.

They were fed hard-boiled eggs when young, then Graham crackers, then chick-feed and later the feed given other poultry.

For results—every one of the twelve chicks lived through the winter. Six of them proved to be pullets. Two began laying the middle of April, and the first of May all were laying. Their age was thus six and one half to seven months when they laid their first eggs. The hen brooder was kept in the hen-house, and no special care was given the hen or the chicks except to place burlap over the wire netting on cold nights when the chicks were young.

They were safe from rats, and also escaped the lice and mites that threaten the life of spring-hatched chicks. This experience may have been exceptional or even accidental, but as far as it goes it is perfect proof of the practicability of fall-hatched chicks when cared for as described.

Cultivate laughter! It has been described as a sensation of feeling good all over and showing it principally in one spot. All your friends like to see you show it. There is also a moral side to laughter. This has been described as the next thing to the ten commandments.

Keep the Chicks Off

By H. W. Welton



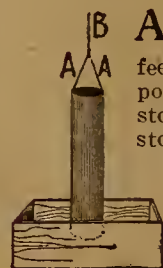
I HAVE used one of these feeders and find that it works. It is an ordinary V trough with a swinging board hung above it. The board (A) should be light, and not more than one-half inch thick for small chicks. It is hung off center a little so that it will always maintain an upright position. It swings on pins (I use nails) which fit loosely in holes (D) which are bored in the standards (B).

On the edge of the trough should be a thin strip (C) of such width as to keep chicks from hoeing feed out of trough. The idea of the swinging board is to keep chicks from defiling the trough. When they jump on the board it flops and dumps them off and immediately returns to its upright position. In a short time chicks learn that they cannot remain on that board.

The lights of the city are near the pavements. In the country God's lamps, the stars, glisten in the sky with no murky lights to dim their luster.

The Stovepipe Hopper

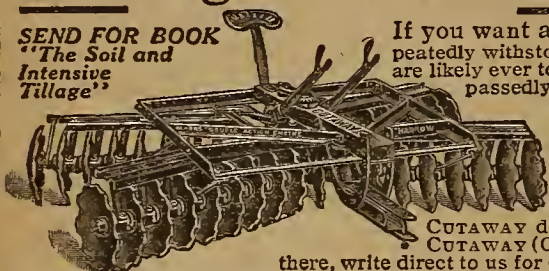
By E. M. Best



A CHEAP, easily made and non-clogging hopper for feeding dry mash or grain to poultry can be made from a stovepipe. Take a length of stovepipe and punch two small holes in one end for the wires (AA) to go through. These wires run to the wire (B) which is fastened to the ceiling. The box is about four or six inches high and twelve inches square. The bottom end of the pipe is about two or three inches from the floor of the box.

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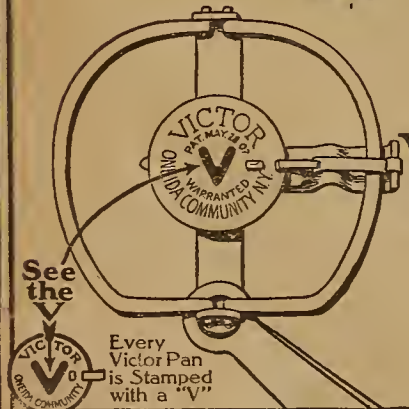
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The Market Outlook

Sheep and Farm Values

By J. Pickering Ross

FOR the past month receipts of both sheep and lambs have been quite heavy at most of the leading markets, but prices have been fairly sustained and the market strong. The heavy shipments have been mostly from the western sheep States, Montana especially keeping up a heavy run, largely of fat wethers, up to the middle of September, and as quality was generally good, prices, varying only as receipts were daily great or small, ranged between \$4.25 and \$4.75. Ewes were not very plentiful, and what there was of them sold from \$3.75 to \$4.25, with feeders from \$2.25 to \$3.75. Breeding-ewes, mostly natives, ranged widely between \$2.25 and \$5.75, according to quality.

Many ups and downs characterized lamb prices, they being governed by each day's supply. Receipts from nearly all western sheep States were large, prices from day to day varying between \$7 and \$7.75. Feeders were not so much sought for as of late, probably from doubts being entertained as to whether the prices which had lately ruled would, considering the uncertainty as to the food-supply, leave room for a fair profit. Considering, however, the unquestioned scarcity of meat animals of all kinds and the approach of the holiday season, there would not appear to be much of a gamble in buying feeders at from \$6 to \$7, for many pounds could be added to their weight between now and then. At all events the owner of a flock of ewes can push their breeding along with a very comfortable feeling of assurance, for both mutton and wool will have to be found in proportion to our ever-increasing population.

A somewhat dull, or perhaps one should say a conservative, feeling seems to prevail in the wool trade just now, caused, of course, by the uncertainty as to how tariff changes will affect both growers and manufacturers. Still the demand for immediate use has, so far, prevented any serious disturbance in prices. We can only wait with patience for time to develop the effects of those changes, keep "a stiff upper lip" and hope for the best.

Why Not Some White Turnips?

If every reader of FARM AND FIRESIDE who owns a flock of sheep, great or small, would try the experiment of growing two or three acres of white turnips to come in just now when the grass, burdened with its crop of parasites, is getting short, I feel sure that the acreage devoted to that purpose would gradually be increased, for there is no succulent so popular with sheep, nor any that so conduces to preserve their health, increase their appetite for their dry ration and improve the quality and flavor of their dry ration. Their cultivation certainly requires considerable labor, but not more than a crop of corn.

I have frequently seen forty tons of swedes grown to the acre on a soil of rather light loam. I once on a seven-acre field of that character, well drained and well manured and sown to white early turnips, added \$3, per head to a bunch of seventy two-year-old Shropshire wethers in a few weeks, and sent them direct from the field to market, averaging 130 pounds. They paid just \$30 per acre and prepared the land for a fifty-bushel crop of barley when malting barley was worth \$1.75 per bushel. They were folded on the land early in September and went to market early in November, eating the turnips directly from the ground and leaving nothing but the bottoms of the shells. They had meadow-hay at night and a one-half-pound ration of crushed oats mixed with oat-chaff each morning. The sheep needed no more water than was supplied by the turnips. Clover was sown with the barley and was a splendid crop.

This is no exceptional case. I only give it as an example of what can be done with sheep on turnips. Swedes, being for winter and early spring use, should be drawn ahead of severe frost, stored and fed in troughs on the laud or in the yards and sliced with a turnip-cutter.

What the Drought Did

By L. K. Brown

LIQUIDATION of thin sows and pigs has continued. Throughout the Missouri-River country disease has been keeping up its toll and pastures would receive but little benefit so late in the season from rains. The prospect for corn has improved slightly,

but the proposition as a whole of feeding out has not been attractive to the bulk of the swine-raisers, especially those of the western portion of the corn belt where the major portion of this year's supply has been raised. The market has fluctuated erratically for some time, the daily receipts being the factor with the most influence. Eastern demand has been strong for prime light-weights, thus putting this class upon a high-priced list. Packers have been indifferent buyers of the packing grades and discriminate against anything with coarseness. This has brought about a wide range in prices. In the near future, however, indications are that the range will narrow considerably. Eastern hogs will be plentiful on the home markets, thus curtailing shipping demand in the West, and as the season advances the shortage of lard caused by the sacrifice of so many thin sows will become manifest, and the demand for heavy finished hogs will improve, thus modifying the range considerably.

Large holders of stocks of provisions are vigorously pushing their sale, as they wish to sell during the fall demand and do not care to carry this stock into the period of winter accumulation.

Everyone is expecting a readjustment of prices presently. As indication of this there has been heavy buying of pork for January and May delivery. These buyers are confident that this clean-up which has been going on since August is going to make the winter supply decidedly shorter than the prospects have been heretofore. It is difficult to tell how long this liquidation will continue and when the market will take on its winter stride, but it is certain that prices will be high for that season—much higher than had the weather not been dry and disease so prevalent.

In buying clover-seed buy clover-seed. That is, if you expect to get a crop of clover. Adulterants? There are many. The latest, however, is the importation by commercial concerns of foreign seed much like alsike and white clover for no purpose other than to adulterate those well-known seeds. The cheap imported seed is rough, and can easily be distinguished, under a low-power magnifying-glass, from the smooth-coated alsike and white clover.

"Skookum" Apples

"SKOOKUM," a Chinook name meaning "very good," is the trade name by which the best apples of the Northwestern Fruit Exchange will hereafter go on the market. This name was chosen from over seven hundred competitive names submitted by fruit-growers of the Northwest.

In order to further stimulate the apple appetite of consumers, the association has formulated a calendar of the proper time to eat the principal varieties of western apples. Here it is:

Jonathan: October and November.
Grimes and Golden Yellow: October.
Spitzenburg, Delicious and Dark Red: November, December and January.
Rome Beauty: January, February and March.
Yellow Newton and Winesap: February, March and April.

Dwarf Kafir Will Win

By C. Bolles

WE HAVE had a very severe year in southwest Nebraska—rains in plenty up to mid-April then one mid-May, mid-June, mid-July, and none since. From mid-June on there have been weeks of hot winds and heat, so much so that potatoes were badly hurt, corn in many cases hopelessly gone and of course the grain end (wheat, oats and barley) cut very short. If under these conditions we had not received that mid-July rain no sorghum or other stuff would have held up.

Under these conditions, then, my milo is in a poor way, as is the later Kafirs, Sudan durra (feterita) and a few other sorghums. Dwarf kowliang, a non-sneaking grain-sorghum, very similar in growth to milo, is doing very well, as is the earlier Kafirs. As for grain-sorghums, the earlier varieties, if thin in the row, will make a fair yield.

Taking into account my own tests and those at various stations where drought-resistant plants are on trial, I doubt if it would pay anyone to try and head off drought with any other sorghum than the dwarf Kafir (black-hulled white). This, of course, is for those farmers living outside of those sections where milo is a staple crop, and where the season is long enough to mature a 115-day plant. For those with a shorter season white cane or one of the earlier ambers could be used either as a forage or silage crop. The dwarf Kafir is the one short-season crop that can brave hot winds, excessive heat, wait for weeks for a rain and then if it don't mature make good fodder and silage.

Chickens become feather-pullers because of too close confinement or an unbalanced ration. Give them exercise, and diversify the food



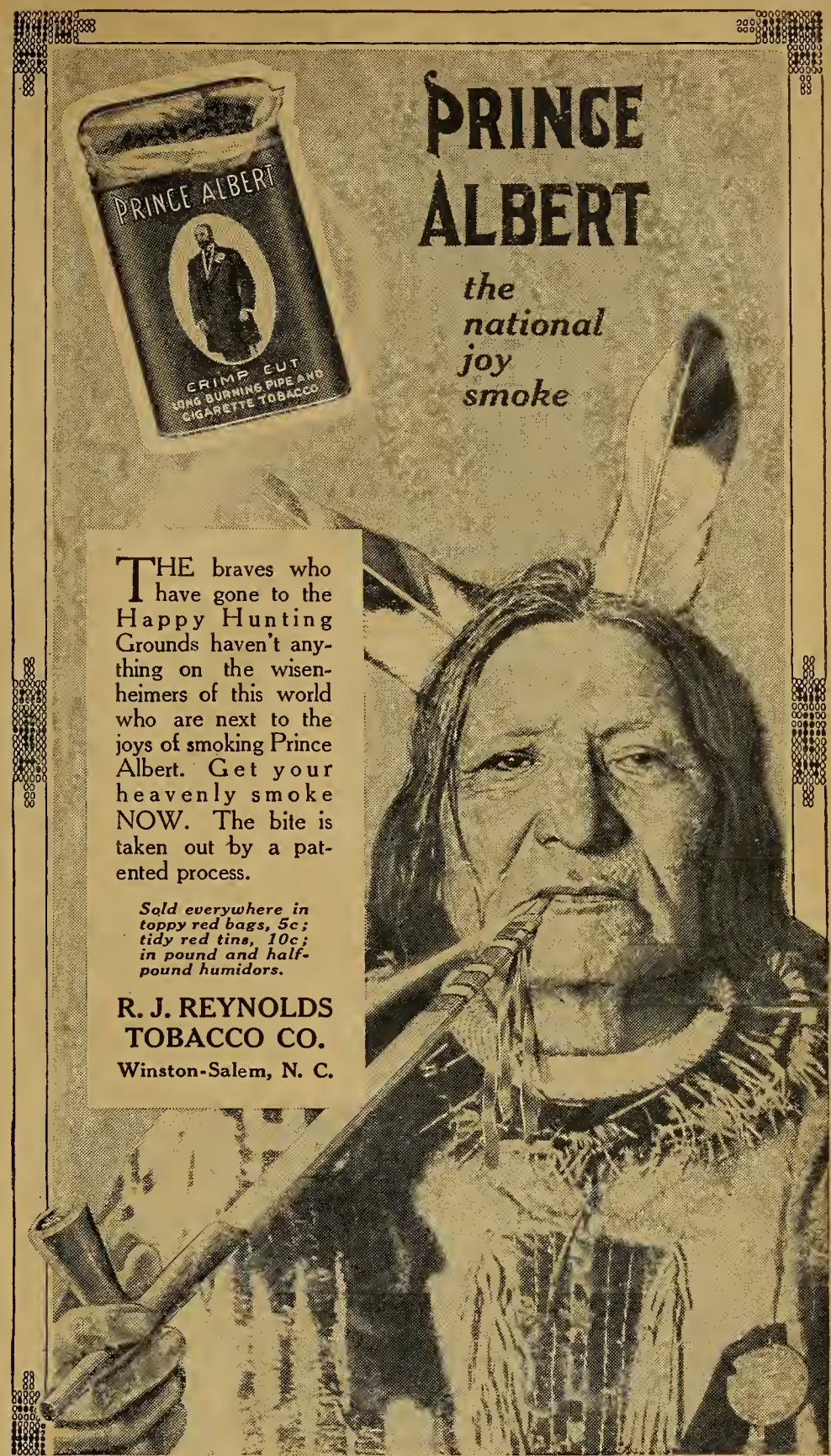
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Danger-Rocks Ahead

The Charting of Some of the Rocks That Marketing Associations Have Run Into is Here Undertaken

A YEAR ago the Growers' and Shippers' Exchange of Rochester, New York, was sailing along in record-breaking trim. Now it is in the dry dock for extensive repairs. But it will be out again before long under a new name, and it will have a better captain and a better chart to guide its course.

We now want to tell about this exchange and how it was run so that others will not make the same mistakes.

It was trying to be the bridge between the grower and the consumer. Its specialty was fruit, and its trade mark is shown on this page.

Its president was E. W. Catchpole, and its manager H. W. Baxter. Its offices were in the Granite Building, Rochester, New York.

That city was picked out because it was the "hub" of the fruit-producing section in western New York. At the start in 1909 the exchange was composed of twenty-two men, and in the height of its prosperity it had about 1,900 members.

The working plan was briefly this: The payment of ten dollars made a farmer a member of the exchange, though he might have additional shares up to a certain fixed limit. The company was incorporated under the laws of the State of New York, and six hundred men were required under the statutes to hold a meeting for the transaction of business. A board of directors composed of fifteen men guided the affairs of the exchange.

Produce stations were established at central points for the purpose of receiving, sorting and packing the produce brought in by members of the exchange. In addition to fruit, which was the principal article, all kinds of farm produce, except hay, grain, and dairy products, were handled.

Just before marketing-time, canvas packing tents were put up at the different stations and skilled persons sorted, graded and packed the fruit and vegetables brought in. All workers were in the employ and under the direction of the exchange.

The most popular package was the eight-quart carton. These were shipped in wooden crates, eight to a crate. Attractive colored labels told the nature of the contents. The label also bore the injunction, "This package must not be refilled by dealers."

Every morning before ten o'clock the central office at Rochester was notified by wire just how many cars of produce were on the sidings at the different packing stations ready for shipment.

In all the leading eastern cities also the exchange had its authorized representatives who watched the needs and trend of the market.

These men wired the Rochester office daily the number of cars of each product needed and the price that could be secured. When the cars were shipped their contents had to be sold at the price determined by the exchange. The goods were sold chiefly through large retailers.

The exchange received five per cent. for its services, but any of this percentage not needed for the payment of expenses in distributing was required by the by-laws to be divided among the members of the association. In 1911 over four hundred carloads of produce were handled.

But difficulties were encountered and trouble came. It sometimes seems as if the better the cause, the harder it must fight. One of the greatest forces that the exchange had to contend with was the natural conservatism of the producer himself. He is a man of good, hard sense, and before he will join even the best organization that can be devised for his benefit he has to be shown it's all right.

Even after he joins he does not always put his heart and soul and entire patronage into it.

Then there is the opposition of the regular commission men. They do not like to see the ground cut out from under their feet. They have their money in their business, and they get their living from it, and when they fight they fight hard.

The exchange is credited with giving the farmers better returns than the commission men because of the more direct system of marketing. It also educated the farmers in the matter of grading, packing and better marketing in general. This put the individual producers, as well as the exchange, in competition with the middlemen.

Together with the obstacles just cited, certain errors in management during the business year of 1912, when a very large business was transacted, led to difficulties resulting in the dissolution of the exchange.

Among the errors were laxity in regulating the cost of supervision at loading stations and too high salaries paid the representatives in several market centers.

The manager must have experience, judgment and executive ability. An optimistic spirit and good intentions are not enough.

The new organization that has been perfected is the Eastern Fruit and Produce Exchange. It has a capitalization of \$20,000 and a brand-new management. It will proceed more carefully than the old exchange, and if it hasn't a Jonah on board ought to make its trips from producer to consumer in safety. We hope so.

But such organizations as this demand loyalty from the farmers interested and wisdom on the part of the managers.



An Interesting Suggestion

AN ARIZONA friend has a suggestion for marketing. "I was reading with much interest," he writes, "the article, 'What One Attempt to Lower Prices Proved,' by H. N. Bartlett, and this thought came to my mind. Why cannot the farmers buy an auto-truck and trail wagons, and carry their own produce to favorable markets?"

Where the roads are good, and both the amount of produce and the market are large, there would seem to be no reason why this cannot be done. Mr. J. B. McIntire, the freight agent who organized the short-lived but very interesting experiment on the P. & L. E. R. R., writes us that by the use of one car attached to a passenger train the business of selling farm produce direct from the car in East Pittsburgh was built up from \$40 a day to over \$500 a day in six weeks' time.

Such a business would pay interest on an auto-truck investment, if the produce could be picked up within the radius of action of the truck. The produce could be picked up at stations where the side roads come into the main roads. The producers would have control of the whole matter, and would escape the liability of having their business strangled by the hostility of commission men and freight departments.

The auto-truck is faster, but the traction-engine hauling trail wagons may also be regarded as worth considering in the premises. An engine or truck hauling three wagons is not an uncommon sight in many parts of the country.

The Horse Still Holds His Own

REPORTS from the Union Stock-Yards of Chicago give the interesting fact that there are now employed in Chicago 72,939 horses, or only 287 less than a year ago. In Boston the number of horses is only 50 less than ten years ago. Minneapolis has 158 more, and St. Louis 730 more, than ten years ago. Inasmuch as the city driving and carriage horse has rapidly disappeared, the figures show that more draft-horses are in use to-day than ever before, motor vehicles notwithstanding.

The Con Man in the Country

[CONTINUED FROM PAGE 4]

for sure where we're at. There's more to this than we've fished up! The road's going to help all that district, but a railroad alone don't make land worth a thousand an acre. We've got to dig deeper!"

"Shall I try Wardley?" asked Redding. "I kept away from him—"

"No, don't you try Wardley," said Babbitt. "You round him up and let me try him again. I know enough now to find out all he knows, and if it's what I think it is Consolidated Farms can go hang and the consolidated farmers can draw out as fast as they like."

Wardley apparently was not easily found, for it was not until the following afternoon that Redding appeared with him. Babbitt, meanwhile, perfected his plan, and he felt that he had matters pretty much in his own hands when Redding finally brought the young man to his room in the hotel.

He began with a bluff. "Mr. Wardley," he said, "tell me how this information leaked, and I'll make it worth your while."

"What information?" asked Wardley innocently.

"About the railroad."

"Oh, that!" said Wardley. "You somehow gave me the impression that you didn't know anything about that."

Babbitt reddened uncomfortably. "Never mind that!" he returned evasively. "I want to know how you knew."

"How about my acre?" parried Wardley.

"Why do you specify an acre?" asked Babbitt, also parrying.

"Because that's the only way to designate a small slice of the land now," answered Wardley. "After it's subdivided and platted it will be different."

This was verification of what Babbitt had hopefully surmised, but he concealed his elation. "Who told you it was to be subdivided?" he asked.

"Nobody," replied Wardley, "but you can't have a town otherwise, can you?"

"Who said there was going to be a town?" persisted Babbitt.

"Oh! you're not sure of it yourself yet?" exclaimed Wardley. "I thought so."

"Who told you?" repeated Babbitt.

"How about my acre?" countered Wardley.

"You get it," promised Babbitt, who was not thereby making up his mind hastily or surrendering to any generous impulse, for, relying upon this to secure the information desired, he had previously sought his loopholes of escape. "Of course," he went on, "I can't actually sell you the property now, for I don't own it yet, but as soon as I can—"

"You can give me an option at the agreed price," suggested Wardley, "for you've got the deal cinched on your own option."

"Oh, yes," said Babbitt. "I'll do that, of course." He had hoped that his inability to give title at once would enable him to escape with a mere verbal promise, but he surrendered without hesitation. "Now tell me what you know."

"The road," explained Wardley, "will cut off a corner of the Baird farm just west of the house, and right about there is where the town is to be."

"What town?" demanded Babbitt. Wardley shook his head. "If it's got a name yet," he replied, "I don't know it. All I know is that it's to be a division terminal."

"What!" cried Babbitt, incredulity, surprise and joy struggling for mastery.

"That's right," insisted Wardley. "It's going to be a city almost from the jump, and I picked my acre as near as I could guess to where land will be highest."

"No," said Babbitt, recovering his poise, "that's too strong. They don't make cities that quick way."

"Out here," retorted Wardley, "the railroads make cities overnight."

Babbitt glanced at Redding, and Redding nodded. "They do," he confirmed.

"But where's the railroad land?" demanded Babbitt. "You can't tell me a road's going to put a division terminal where it hasn't already got all the land it needs."

"They got it," asserted Wardley. "It's being held under cover until they're ready to spring the news, but they got it, and the Baird farm's the closest to it of any."

"How do you know this?" persisted Babbitt.

"One of the boys picked it off the wire," explained Wardley. "We had it sized up pretty well before that, only we didn't know for sure."

"Bring him here!" ordered Babbitt.

"Guess again!" snorted Wardley. "It would be like kissing his job good-by. A whisper would finish him. Besides, he works up the line."

"But I've got to have verification," urged Babbitt.

"I don't see," put in Redding, "how you could have any more confidence in one than in the other, so what verification would there be in that?"

"It seems to me," added Wardley, "that the fact that I'm backing my story with my money ought to be enough. Anyhow, it's got to be enough. I've told you all I know, and now I want my option."

"Oh, that will be all right," assured Babbitt easily. "There's no hurry about that."

"Yes, there is," insisted Wardley. "I want it now!"

Babbitt began to bluster, for here was one of his loopholes. "If you try to bluff me," he threatened, "you won't get it at all! I don't know that you're entitled to it."

"I think he is," remarked Redding quietly.

Here was a jarring note that was altogether unexpected. Babbitt had regarded Redding as his man, bound to him by all the ties of interest. If not, then Wardley had a witness to the agreement, and one loophole was closed.

"He hasn't given any proof—" began Babbitt.

"He has done all that he promised, I think," said Redding judiciously.

Babbitt hesitated but a moment. Wardley alone he might safely disregard, but Wardley backed by Redding was a very different proposition. "Oh, very well," he acquiesced. "I'll give you the option now, but I shall have to charge you five hundred dollars for it. I believe nothing was said about the option price."

He glanced doubtfully at Redding, but Redding nodded affirmation of this and he was reassured. Redding, whatever the explanation of his momentary dereliction, was in line again.

"That's too much!" objected Wardley, whereat Babbitt smiled. Behind an option price that Wardley could not instantly meet there was another loophole. "It's a whole lot too much!" insisted Wardley, and Babbitt's smile broadened. "But I suppose I'll have to pay it," sighed Wardley, reaching for his money.

A very few minutes later, Babbitt, again dazed, stood alone in the middle of his room, holding in his hand five hundred dollars in perfectly good Canadian bills, for which he had given an option on land that he did not own, and wondered how it had all happened.

"Those boobs certainly put one across on me," he reflected. "They called themselves in on the deal and made it stick. Well," was his consoling conclusion. "I guess there's plenty for us all, especially me."

For Redding's parting words had removed his last doubt. Another of the farmers wanted to draw out of the Consolidated Farms proposition, which meant that another of the farmers had got the railroad tip. And Babbitt had cheerfully agreed to release him and all the rest. With a town-site lapping part of the land, there was nothing to that now.

A good sport, according to Babbitt, had to be a good loser, and he considered himself a good sport. He took things as they came, and reached after them when they didn't come, but he held that the true test was to smile when they went. And he was able to smile—up to a certain point.

When it became known, as it did almost immediately, that the new transcontinental would pass some fifty miles to the north, he shrugged his shoulders and said it was

very lucky for him he wasn't in any deeper. When he tried and failed to pick up the loosened threads of the Consolidated Farms scheme, he smiled and reflected that everybody makes an occasional misplay.

When Wardley made a demand under his option for his one acre of land, he merely laughed and offered to return his money. When Wardley refused it, he became annoyed and told him to go to thunder. When Wardley threatened to have him arrested for operating a confidence game, he became worried and offered a bonus of a hundred dollars to settle the matter. When Wardley refused that, he called him a blackmailer and asked him what he wanted. When Wardley asserted that nothing in the world would satisfy him but actual title to the land specified in the option agreement, he began to see where he stood. And he wasn't at all comfortable, either.

When he thought of flight, he decided that the chance of getting far was slim in view of the seriousness of the charge that could be brought against him; and there were also other reasons for not wishing the eye of the law turned in his direction.

When the girl stood on her option agreement and would sell no part of the farm for less than the whole of it, he was still able to smile, but his smile was now faint and forced.

"They've got me between them," he reasoned, meaning Miss Baird and Wardley, "and they've certainly got me good and right. I've got to buy to protect myself, for my option expires first."

When, the acre being tendered, Wardley decided to forfeit his option payment rather than buy, he was not greatly surprised and accepted the decision philosophically, although he made some inquiries.

"Wardley?" repeated the hotel clerk. "Worth anything? Well, fifteen or twenty cents perhaps—not more than that, I should say."

"Her money!" murmured Babbitt. "I suspected as much. Smart girl, that!"

"Who's smart?" asked the clerk.

"Miss Baird."

"I guess she is," agreed the clerk. "I've heard a good deal about her. Started on her honeymoon last night."

"What!" exclaimed Babbitt.

"Why, of course," asserted the clerk. "Didn't you know that? Married young Redding, the fellow that's been with you so much. Surely he must have said something about it. They've been planning for some time to get spliced up, but somehow things didn't seem to break just right for them until now. By the way, I understand you bought her farm. What you going to do with it?"

"Put dynamite under it and blow it to thunder!" roared Babbitt, for even a good loser may have his limitations. [THE END]

Farm Notes

The Cost of the Rural Phone

By A. J. Legg

This article gives actual experience. But it should be borne in mind that the actual experience of the first four years of a telephone system is not the whole story. Deterioration is just beginning then. The history of telephone systems built by beginners in the business has been that for the first few years they think the lines are making money hand over fist. In six years troubles are beginning. In ten years the line needs rebuilding, and there is no way of doing this except by assessment—and no legal power to assess. It is better to build well, charge rates which will make the accumulation of a sinking fund possible, and be ready to take care of the increased expenses when instruments and construction begin to break down.—EDITOR.

SOME time ago a writer in FARM AND FIRESIDE put the cost of installing rural telephones at \$100 for each phone holder.

Of course the cost of putting in telephones will vary according to local conditions. In this part of West Virginia (Albion) the telephone-poles are a small item, since there are few farms that have not plenty of timber growing on the farm. We use chestnut timber, of which a good pole will last about fifteen years.

When our telephone company had to purchase poles to extend its line through a large tract of company land, a lumber company offered to furnish poles delivered to where they were needed at \$1.50. The telephone company made other arrangements by which they got their line through considerably cheaper.

Our rural telephone company was first organized October, 1908. A few farmers and business men got together and organized a joint stock company for the purpose of installing and keeping up a rural telephone for their mutual benefit. They got a permit from the county court to run their lines along the county roads in their and an adjoining district of the county. Each member agreed to put in poles from the nearest line to his house and to pay into the treasury \$18, for which he became a stockholder and was furnished a telephone box installed in his home or office.

This system extended rapidly and made connection with the Bell Telephone Company on condition that messages were to be transferred from one line to the other upon payment of the usual fee to whichever company it was due. These fees usually show a balance due the rural company upon settlement.

The Lines Grew Rapidly

The lines of the rural system extended rapidly, and for a while the \$18 per share paid the costs of installing telephones, but pretty soon there had to be double lines run, lines got away from the thickly settled sections of the country and extra assessments were levied.

The number of poles required to get my phone were eleven, and I got them put up at a total cost of less than \$10, counting the worth of the poles, cost of setting them and all. My share of stock, which included a phone installed, was \$25.

The entire system is organized under the management of a president and general manager, a secretary and treasurer and board of five directors. The president gets two dollars per day for services actually rendered. The board of directors serve without pay.

The general rules, which are of most importance, are that each stockholder must pay monthly dues for paying the switchboard tender and furnish batteries for the phones which he uses. The expense runs around \$2.50 per year.

Any phone-holder has the use of any other phone on the lines of the company. Persons not holding phones are charged a fee of ten cents for each central passed through. Messages passing to other lines are transferred to any other company with which our lines are connected, upon the payment of the fees charged by such other company. The use of the phone is limited to five minutes, provided someone else wants the line. A person may be fined for using profane or ungentlemanly language when talking over the phone, and if he persists in violating this rule his phone may be taken out and service discontinued.

Since all phones are the property of the company and each stockholder is a holder of a transferable share of stock, he must submit to the rules of the company.

The Business is Well Managed

The company holds annual meetings of all stockholders, for the election of officers and the transaction of other general business, in the month of September, at which fifty-one per cent. of the stockholders in person or by proxy constitute a quorum.

Each division holds annual meetings, and may hold special meetings upon the call of fifty-one per cent. of the stockholders of the division.

Our experience is that telephone companies should be a little careful in disposing of stock and admitting members to the company, since a person who is disposed to make trouble may succeed in laying plans to deceive and mislead other members of the company, for a time at least.

Assessments may be made upon the stockholders of the company for necessary improvements. Members are not entitled to participate in stockholders' meetings until all dues and assessments are paid.

Our telephone system has been in successful operation over four years and bids fair to continue successfully. Eight-gauge galvanized wire is used on our main lines, and the cost of installing telephones where lines are already established is put at \$40 each, so persons may get on the lines already established by permission of the local board of directors upon the payment of the above amount.

A Cheap Stubble-Cutter

By Dallas Greenler



NAIL some boards in the shape of a wedge (B) so it will go between two rows of stubble. Have an old cross-cut saw (A) cut in two, and have a hole punched in each end of each piece. Then have the side opposite the teeth sharpened and bolted to the wedge. C represents a bolt. This is a cheap and durable cutter. I have runners attached to make the cutter move more easily.

A Still Small Voice

IT WAS at the state convention of bacteria. Delegates were present from all over the country. Some had come not less than three quarters of an inch, and a delegation blown by the wind from across the road were the observed of all observers. No bacterium had ever been seen from so remote a country.

The convention hall was the shell of a nodule of a crimson-clover root; but as there were only twenty-seven billion delegates there was no lack of room.

The report of the Committee on Nitrogen Fixation was read and debated. "This report shows a very unpromising condition," said the chairman. "This whole region for inches on every side of us is losing nitrogen. We have done our best; but try as we may, we can't deposit a bit of anything in the

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I want to send you My Book Free

It tells my story—how "steels" save your feet—your health, your money. Why they are best for every man or boy—farmer, dairyman, stockman, fruit-grower—everyone who "hits the grit" or plods the furrow—for every outdoor man. Made in all heights from 6 to 16 inches—all sizes for men and boys. This book will open your eyes to new comfort, service, economy, protection and satisfaction.

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Many Uses Of Acetylene Keep Inventors Busy

The Magic of Gas Producing Stone—Brings Out Many of the Most Wonderful Inventions of the Age

A few years ago no one but a College Professor who had looked it up could pronounce the word, "A-cet-e-lene".

Today every school boy can tell you the whole wonder story—viz.:

That Acetylene is an illuminating gas.

That it is the richest gas known.

That its light is ten times as brilliant as city gas light.

And that it can easily be made anywhere, by anybody, at any time by simply mixing "Union Carbide" with plain water.

As the boy himself would write it—

"Carbide + Water = Acetylene"

The simplicity of this formula was an inspiration to inventors right from the start.

Each one saw a new possibility.

Each one saw that the Union Carbide could be stored anywhere.

And each one saw that the work of mixing the Carbide and water could be done by mechanism operated by the gas itself.

As a result inventors have taken out some 600 patents on "Acetylene Generators"—all designed to make Carbide-gas for different purposes.

Today we have thousands of acetylene lighted ships and railway trains.

Uncle Sam has strings of Acetylene light-buoys and light-houses located on all of our coasts and along the Panama canal.

Acetylene Torches of 1000 candle power are carried by firemen in a hundred big cities.

Huge acetylene lights of 12,000 candle power illuminate vast out-door construction projects.

War ships carry floating self-lighting acetylene-torches which they shoot out

on the water to illuminate the ocean for miles about.

Army and navy surgeons use special acetylene equipment for field hospital work.

Half a million Miners wear Acetylene mine lamps on their caps.

Chickens are hatched in Acetylene-heated incubators on thousands of farms.

Armies of workmen use Oxy-Acetylene torches to cut and weld metals—in the world's biggest factories and machine shops.

Ninety per cent of the world's automobiles are equipped with Acetylene head lights.

Big Acetylene plants light whole towns and cities—the streets public buildings and houses.

And—most important of all—250,000 country families use home made acetylene for lighting and cooking.

On these rural places acetylene is used just exactly as a million families use gas in the city.

The only difference is—the country gentleman has no gas company to deal with.

His Acetylene is Home Made

A hundred pound drum of Carbide costs him—on an average—\$3.75.

From this one drum he gets more light than he could from four thousand five hundred feet of city gas.

A country acetylene plant consists of a generator to mix the carbide and water, pipes (the same as for city gas), a gas stove and such artistic bronze or brass lighting fixtures as the housewife's taste may select.

A generator of standard size big enough to feed a stove and 30 lights, can be set up in your basement—in an out-building—or in a hole in the backyard.

The pipes are usually extended to lights located in barns and out-buildings.

This equipment is, of course, a permanent asset. It lasts as long as the house itself.

Without question these 250,000 homes have the most practical and the safest light and fuel system yet available for the country.

The carbide can be stored any length of time in the hundred pound cans in which it is sold—It won't burn and can't explode.

The Newest Generators

now automatically make gas only when the lights are in use, mixing less than a spoonful of carbide with the water every few seconds—just enough to keep the burners going—no more, no less.

The light fixtures are permanently fastened to walls and ceilings. They cannot be upset or tipped over.

And, these facts influenced the engineers of the Board of Fire Insurance Underwriters to recommend acetylene as much safer than illuminants it is displacing.

As a cooking fuel used in a special gas range acetylene furnishes heat on tap and does entirely away with the handling of kindling, fuel, ashes and soot.

Complete acetylene plants for all purposes are now sold everywhere. Any man who can cut and fit pipe can install one in any home in two days without injury to walls or floors.

Write us for full particulars and we will gladly send you our advertising literature telling the whole acetylene wonder story.

Address your letter to THE UNION CARBIDE SALES CO., Dept. O—128 So. Michigan Boulevard, Chicago, Ill.

way of a nitrat to a depth of over six inches. Something has happened to us. The whole community is going to the dogs. As soon as we get down over six inches, we can get no air. And if we can't get air, we can't fix nitrogen. We must get our nitrogen from air, unless other source of supply can be suggested. For my part, I am very pessimistic. I shall be glad to hear the ideas of the convention, and I hope debate will be general."

"This problem has been solved very nicely on the other side of the road," said one of the strange bacteria. "Or rather it solved itself in quite a wonderful way. There came a great roaring over our heads one day, and a heavy rain of stained straw covered the earth. Just as we were getting used to this, a great upheaval lifted up nearly a foot of the earth and stood us on our heads. Everything crumbled up, and the air at once began to circulate away down deep. We who were near the top were almost a foot down when this great earthquake was over; but it was so loose and warm there that we set to work and fixed more nitrogen in that field in one season than you can fix here in two. The stained straw and the deep plowing gave us the air we needed. I should advise you to pass a resolution—"

But just then a Rothamstead amoeba sneaked in through the door and ate the chairman and eight billion delegates, and the meeting adjourned in great confusion.

Whitewash Worth While

By P. W. Humphreys

"LOOK out for your coat! Don't lean against the fresh whitewash," I cautioned my guest who was being conducted through a famous neighboring poultry-plant. The various chicken-houses and out-buildings were so beautifully white and fresh looking as to give the appearance of freshly applied lime that would rub off and whiten everything coming in contact with it. The owner of the plant looked up with a smile of superior wisdom, however, at my words of caution, and replied: "Lean against the white walls all you want to; my whitewash won't rub off on your coat or on anything else."

Not only the numerous chicken-houses, but the spring-house, the cellars, the storage sheds and even the wood-house were all beautifully clean and sanitary from generous coatings of whitewash; and not in a single instance did the white coating possess the objectionable feature of "rubbing off."

On being questioned concerning the secret of success in the home preparation of whitewash that sticks like paint, the owner of these model farm buildings disclosed the fact that buttermilk is the inexpensive solver of a very important point in whitewashing. On the farms where butter is made and there is a plentiful supply of buttermilk, whitewash may be made practically paint-like in its consistency at very little cost.

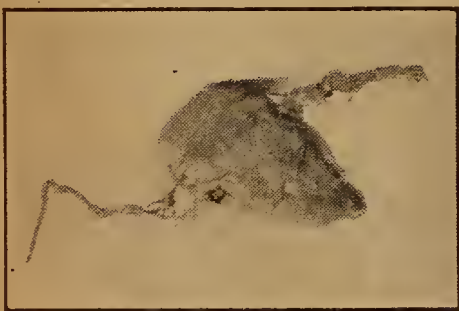
According to the owner of the clean, white poultry-houses, the best plan is to treat the lime with the buttermilk application for several days or a week before it is desired for use. He puts his lime in a large vessel—in this instance in a big iron scalding-pot used at hog-killing time—and pours the buttermilk over it. After standing about a week, until the lime is soft and paste-like, the surplus buttermilk is carefully dipped and poured from the top, without stirring up the lime.

Then fresh buttermilk is added, to make the whitewash of the right consistency, a cupful of fine salt is added to the mixture, and it is ready for use. It may be mixed in smaller vessels and kept in its paste-like form until ready for thinning with fresh buttermilk in the whitewash-bucket.

Remarkable Root Growth

IN EXAMINING some nursery stock received from a New York nursery, C. A. Vatcher of southern New Hampshire discovered the remarkable growth of a rootlet through the stone shown in the photograph. The rootlet was part of the root system of a yearling peach-tree and had grown directly through the stone, which was an inch thick where penetrated.

The stone is otherwise perfectly solid and free from holes of any kind. The root-



The stone was an inch thick

let is one eighth of an inch in diameter. The only explanation of this phenomenon is the common knowledge that all roots exude plant acids which have the power of dissolving minerals, and in this case the action of the acid was unusually rapid.

Scientific Timber Cutting

THE slogan of the American Forestry Association is "Save the forests." That slogan is not the sentimental outburst of nature lovers nor does it mean that no timber must be cut. It is the expression of opinion of practical foresters most of whom have grown gray in the service. It means that only mature trees be cut and that fires and other causes of forest waste be brought under control.

Here is some of the latest forest knowledge gathered especially at the last meeting of the American Forestry Association for readers of FARM AND FIRESIDE.

It comes from such men as Dr. Henry S. Drinker, president of the American Forestry Association; J. W. Toumey, director of the Yale School; William L. Hall, of the United States Forest Service, and Charles L. Pack, president of the National Conservation Congress.

The greatest mistake of all mistakes in cutting timber from a forest or woodlot is not to leave enough large trees to reseed the cutover land. From five to twenty-five per cent. of the trees should be left.

Laud owners make a mistake in waiting for the government and state to demonstrate or conduct forestry for them. The principles of forestry are easily learned and may be profitably used by any land owner.

By trimming off the lower small branches early in the growth of trees, the wood is made more nearly free from knots.

Forests and woodlots add to the value of a farm and to a community. People not only are not attracted to treeless regions but actually leave them, thus resulting in poorer industrial conditions.

Woodlots are important as windbreaks, soil binders, surface-run-off regulators and shade for stock.

Germany uses valuable agricultural land for growing oak forests that require two hundred years to mature. The purpose is to make the industries using oak independent of importers and dealers. Farmers can apply the same principle in raising their own fence posts, poles and firewood. The increase in growth of a woodlot depends largely on the soil, but largely also upon the kind of management that is given.

All idle lands should be forested. Some kind of tree will grow on almost any soil. All land should be so managed that its usefulness in the future will be great.

Inexpensive Windbreaks

By P. W. Humphreys

THE advantages of establishing windbreaks for earlier and more vigorous crop development in exposed situations is thoroughly appreciated by the average



Though grown principally for ornaments, they also shelter the gardens

farmer and trucker. The work of establishing the desirable evergreens most suited for this purpose is too frequently neglected, however, because of a mistaken idea of excessive cost. It should be remembered that it is not necessary to secure the perfectly formed specimens of rare evergreens intended for beautifying lawns.

The fact is coming to be appreciated by the farmers and market gardeners who desire to hasten the development of early crops for the highest market prices that not only will they be able in a short time to make up the cost of the windbreak in increased prices for their vegetables, but also that the original cost may be light and the upkeep of the windbreak practically without cost when the trees are intelligently selected. A visit to the nearest good nurseryman, at the time of the spring planting, or at the time of early fall planting, may prove a revelation to the farmer who has been accustomed only to catalogue prices. He will discover that large consignments of culls of the most desirable trees may be secured at very reasonable rates.

Use Double-Headed Trees

What are known as "double-headed trees," considered imperfect specimens for lawn planting and difficult to dispose of, will be sent out in quantities by the nurseryman desirous of clearing his land for fresh growths, and those twisted, or so-called lopsided, growths will also be included among the culls at surprisingly small cost. The double-headed trees are peculiarly adapted for establishing windbreaks, giving defense from cold winds over a greater surface of the soil when the thick top growth corresponds with the compact growth at the base of the hedge.

These shelter belts should be established in a practical manner to insure their de-

pendable utility for many years—the trees being chosen in accordance with the nature of the soil in which they are to be grown. It is well known that in the Northern States the white and yellow pines, with the red cedar and the Norway spruce, are best adapted to the purpose of establishing long-lived windbreaks certain to retain their compact foliage when it is most needed for sheltering crops on exposed situations. Though these trees are planted extensively and their dependable qualities quickly respond to intelligent treatment, they will resent any attempts to grow them in unsuitable soil. The Norway spruce and the red cedar flourish best where red or yellow clay forms the basis of the soil, while for sandy situations and soils that are somewhat gravelly the yellow pines are most suitable.

When it is desirable to plant large trees for immediate effect the expense will be



A windbreak gives seclusion and garden privacy

greater than the average farmer will consider justifiable, unless it is for special truck-gardens or for vineyards of special fruitage on sunny slopes. The best manner of overcoming this expense, and at the same time to secure a shelter belt that will prove speedily effective, is to secure the culls in large quantities and set them closer together at the first planting than they will be needed when well grown. When the trees are planted only ten or twelve feet apart and in two rows, the trees of one row alternating with the spaces in the other, good results are obtained the first season, with increasing usefulness in years to come. Naturally it will be necessary to remove every alternate tree when subsequent growth causes them to become too crowded; and the thought of this supposed "waste" will deter the economical planter from setting the trees sufficiently close for immediate results.

It must be remembered, however, that the crowded growth need not be removed by the usual method of cutting out the crowded trees to give standing room for those that are to form the permanent windbreak. These trees will bear transplanting, even when ten or fifteen years old, and will quickly take root in new quarters. This fact should encourage the practical gardener to plant lavishly at first where the windbreak is most needed, and later to transplant all the crowded trees to establish other shelter belts of well-grown trees.

Not only will gardens thus sheltered from sweeping gales ripen their products earlier than those that are in exposed situations, but they also have the advantage of being cared for with greater comfort for the planter, besides permitting of planting much earlier in the spring. Young orchards thus protected on the north will show a very satisfactory increase in profits over those that are buffeted by every wind that blows. In cold northern climates, and even in the supposed mild climates where unexpected severity of winter winds may be encountered, it is desirable to establish windbreaks for stock-yards and poultry-houses, and the fact that the yellow pine, the Norway spruce and the red cedar are hardy from the far north almost to semi-tropical climates will cause these to remain the favorites for permanent windbreaks, although many other varieties of evergreens are recommended by nurserymen, and will provide good shelter when planted in suitable soil.

Beauty and Utility are Easily Combined

The planting of ornamental evergreens of tall growth are frequently found on suburban estates, established chiefly for their beauty and kept carefully trimmed in stately uniformity, like those of the illustration. Though such trees are intended for giving seclusion and garden privacy, as well as for ornamenting the grounds, they invariably serve a third good purpose in providing shelter for the vegetable-garden, the flower-garden and especially for the rose-beds that will produce sturdy development impossible without the windbreak.

A vineyard established close to an evergreen windbreak will give the best results when the vines are kept well trimmed back, with the supporting posts at considerable distance apart and the vines trained on wires running from post to post. Rose-gardens established for commercial purposes provide lavish quantities of bloom, of such special beauty that the extra profits will quickly pay the cost of the windbreak. These shelter belts also have the advantage of encouraging the insect-eating birds to nest close to the orchards and gardens where their services will be appreciated.

Water in Bottles

THE United States Department of Agriculture has issued a warning against the fraud of radioactive mineral waters offered for sale in bottles. The government chemists have found that while certain mineral waters possess radioactivity as they come from the spring, the emanations quickly disappear in the form of a gas. When the water is a few days old it possesses practically no radioactivity. Any apparent benefits derived from the use of bottled radioactive waters are much more likely to be the result of a strong imagination rather than any medicinal effects.

Rabbit's Tail as a Pollen-Brush

By L. E. MacBrayne

A GENERAL understanding exists in this country that such vegetables as cucumbers and tomatoes cannot be raised under glass without a swarm of bees, and owners of private greenhouses, or others who are making flowers their main crop, feel that it is not worth while to go to this expense unless fruit is being raised for the market.

English gardeners in this country, however, are following the methods taught across the water, and are fertilizing by carrying the pollen from the male to the female blossoms on camel-hair brushes, or by means of a dried rabbit's tail. The male flowers are almost always more numerous than those of the female plant, and the brush or the rabbit hair will serve to carry the pollen as readily as will the bee.

One supply will serve to dust a number of flowers, before it is necessary to renew, and a little practice makes the work comparatively easy to perform. In England plums, tangerines and other fruits grown under glass are pollinated in this manner.

Thirty-five per cent. of the government receipts last year from grazing fees on the National Forest of Montana will go for the purpose of schools and roads in Montana. The national forests of Montana contain an abundance of first-class summer range.

You Can Overload a Road

THE Massachusetts Highway Commission has just collected some interesting facts showing just how and why roads wear out. Automobiles do much less harm than is commonly supposed. Gravel and macadam roads are ruined most quickly by wagons which are loaded too heavily in proportion to the width of the wagon-tires. Near a certain ice-house in Massachusetts an average of about sixty ice-wagons a day, carrying three tons of ice each, on tires averaging from one and one-half to three inches wide broke up in a month the side of a macadam road on which the loaded teams traveled, while the surface on the other side where the teams came back empty was in good condition.

The commission believes that a law which would fix some maximum weight per inch-width of tire in contact with the roadbed would greatly lengthen the life of country roads. In other words, you can overload a road just the same as you can overload a wagon or a horse.

Hand-Cart from Old Buggy

By John M. Crow

I ALWAYS did dislike to see old machinery and implements lying about a place. Last fall we had an old buggy to throw away, and instead of setting it behind the barn to stay an eyesore, I made it over into a hand-cart.

The body was used for the body of the cart by removing the seat and setting the body back between the hind wheels. The double reach was left in place for a handle.



The old buggy made useful

When the front axle and the fifth wheel were removed there was a convenient T-shaped piece for a handle. All that had to be added was a tripod of strap iron to hold up the front end.

Imitation Science

WAS it "science" that was given to the teachers of an Indiana county at their institute this summer, or only just imitation science? According to the news despatches, it was given under the head of "domestic science," but it seems neither scientific nor domestic.

"Plenty of apples will cure drunkenness," it is reported, was one thing taught. Enough to kill would do it, of course. "Fruit juices are the best germ-destroyers" is another wild statement, and to make the thing worse the statement is reported to have been made that pineapple juice will cure

REVIVED

Old-Time Health, Eating Grape-Nuts

"I had been sick for 10 years with dyspepsia and a lot of complications," wrote an Ark. woman.

"An operation was advised, change of climate was suggested, but no one seemed to know just what was the matter. I was in bed three days in the week and got so thin I weighed only 89 lbs. No food seemed to agree with me.

"I told my husband I was going to try some kind of predigested food to see if I could keep from this feeling of continued hunger.

"Grape-Nuts and cream was the food I got and nothing has seemed to satisfy me like it. I never feel hungry, but have a natural appetite. Have had no nervous spells since I began this food, and have taken no medicine.

"I have gained so much strength that I now do all my housework and feel well and strong. My weight has increased 8 lbs. in 8 weeks and I shall always eat Grape-Nuts as it is far pleasanter than taking medicines."

Name given by Postum Co., Battle Creek, Mich. Read "The Road to Wellville," in pkgs. "There's a reason."

Ever read the above letter? A new one appears from time to time. They are genuine, true, and full of human interest.

tonsillitis, lemon juice will destroy the typhoid germ and grape juice will assist in the cure of grip.

These are wicked statements to make for which there is no basis in science. A teacher who states that lemon juice will kill the typhoid germ is morally responsible if her hearers administer lemons to a typhoid patient with fatal results—as might easily be the case. The only cure offered by this teacher, according to the reports, for which there is any authority is the apple cure for "stomach trouble, bad temper and love." The authority for this seems to be Scriptural rather than scientific, and is to be found in that verse of the Song of Solomon which reads, "Stay me with flagons and comfort me with apples, for I am sick of love."

Saw-Buck for Large Timbers
By William Moyer

THE sketch shows the construction of a self-adjusting saw-buck for poles and logs from ten to sixteen feet in length.

The upper sketch is the roller made from a piece of log eight to twelve inches in diameter and twenty-four inches long. Make three saw-cuts a third of the way through the stick all around. Split off A and B and make the projections round and smooth. Chop out a notch at C to hold by.

Now take two timbers (GG) four by six inches, each ten feet long. They may either be hewed or purchased from the lumberyard. Set them on posts to fit the roller, making top of the track about eighteen inches from the ground at one end and fifteen inches at the other so the roller will return to the lower end of itself. Set a crotch in the ground at F, the high end. Do the sawing to the right of the crotch. This is the best saw-buck I ever tried for sawing logs or poles.

Ruby-Throated Humming-Bird
By H. W. Weisgerber

THAT it takes a quick eye to follow one of these little sprites as he darts, like an arrow, before us, I will admit; yet by constant training it can be accomplished. The mind, too, must act rapidly at arriving at conclusions, so as not to be fooled by the sphinx-moth or other large insects. The humming noise of the rapidly beating wings can also be detected by a well-trained ear.

While these humming-birds arrive on the crest of the great migratory wave of early May, they are not much in evidence in the garden until midsummer, when the gladioli and cannas are in bloom. Then it is that they make regular visits to these flowers for their food: the small insects that are attracted by the sweet nectar. The birds may also sip some of the sweet fluid. They also find minute insects on old wood, brush and bushes; gnats, too, they capture in fly-catcher fashion, and I have observed them gathering these small insects from a spider's web where they had been snared.

The hummer spends much time on the perch, and when thus at rest is always busy preening his glossy feathers. I have watched him time after time. At one time



Fairy Magic—Telephone Reality

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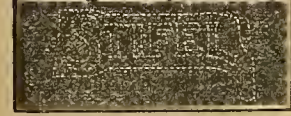
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Garden and Orchard

The Real "Wonderberry"

By Doss Brittain

THE real "wonderberry" has at last been discovered. It is a modest plant growing from six to eight inches high and probably producing more and larger fruit for the size and weight of the plant than any other in domestic use, except possibly the pumpkin. The fruit is deep crimson in color, with small seeds that are unnoticeable. As to flavor, this real "wonderberry" may be described as the berry



Three hundred berries on this one plant

with electrical attachments. There is no fruit in the world which compares with it in the number of people it will affect pleasantly through the sense of taste. It is universally liked, or has been wherever tried. The fruit is a large berry, some specimens being large enough to fill an ordinary teacup.

Careful investigation shows that anyone who knows how to grow onions or can learn how to set out tomato-plants can grow this "wonderberry" successfully in almost any climate and nearly any soil. The plant produces wonderful crops of the most delicious fruit known to man. One woman produced sixty-five gallons of these berries from one hundred plants; another, eighty-five gallons from one hundred plants. And these were not world's records either. They are only a little above the frequent performances of those who have undertaken the culture of this wonderful berry.

Another feature that recommends this fruit is the varied ways in which it may be prepared. It is delicious unprepared. It makes excellent pies, preserves and jellies, and for shortcakes it is without a peer in the world.

This real "wonderberry" is ordinarily known as the strawberry, and the real wonder about it all is that more people don't know about it and grow it in their gardens. A small space fifteen feet square has been known to produce over one hundred quarts of fruit. Another wonder is that a fruit that has been so long in cultivation is neglected by people who are chasing rainbows in the form of a little purple-fruited degenerate that produces about half a dozen berries smaller than buckshot and about as useful for human food. There is only one reason why strawberries are not grown in every garden, and that is, those who own the strawberryless garden do not understand the strawberry. Chase a fad only after it becomes a fact.

What Age Apple-Trees are Best

By C. M. Weed

IN BUYING fruit-trees it is easily possible to pay too much or too little. You are pretty certain to pay too much if you buy of the itinerant tree agents with their gaudy catalogues or even if you buy direct from those reputable nursery firms who list the trees at fifty cents each. You are also quite likely to pay too little if you depend entirely upon the bargain trees offered by many reputable firms that sell good trees at fair prices.

The larger nursery firms commonly offer three grades of two-year-old apple-trees marked as X, XX, XXX. Sometimes practically the same groupings are made under the headings, medium size, first-class size, extra size. In either case the smaller trees are likely to be about one-half inch in diameter and the others decidedly larger. The prices of these three grades are likely to vary about five dollars a hundred. If the XXX size are quoted at \$25 per hundred the XX will be about \$20 and the X about \$15. Thus there is an apparent saving of nearly half in the first cost of the trees, which, if one has much land and little money, is a temptation.

These same X trees are often listed in another part of the catalogue as bargain-size trees and recommended for orchard planting. But they are just as small when bought under this heading as under the other.

The chief objection to these puny trees is that they have made a poor start in life. Because of inherent weakness or unfavorable conditions of growth they are stunted, and it will take a year or so of abundant food and favorable surroundings to bring

them into even a normal habit of growth. The first season's growth is commonly the critical period of a transplanted tree's life, and if it is poor the tree is likely to be winter-killed or die the next season.

But in any case the tree is slower in its later growth and is very likely to take longer to come into full bearing, with a possibility that the fruit will be less abundant and of smaller size than that of its more fortunate neighbor.

The same nursery firms commonly offer one-year-old trees under either the single heading of XXX or of that and XX. The largest size of one-year trees costs nearly the same as the smallest size of two-year trees and are greatly to be preferred.

Wintering Sweet Potatoes

By R. M. McDaniel

IT IS getting harder and harder for the southern farmer to keep his sweet potatoes from rotting through the winter here in Georgia. One reason for this is that we have abandoned the old style of bank, the bank that was filled to, and not beyond, the limit, straw spread on uniformly, a close layer of corn-stalks put on perpendicularly and dirt left off overnight, for the potatoes to sweat. The next morning, after the sun had warmed up things somewhat, an even layer of dirt was spread all over the bank except right at the point, or top. At the point of the cone, for these banks were made cone shape, a box or V-shaped trough was placed over this small hole in such a manner as to let in a little air but at the same time keep out the rain.

Limitations of Wooden Houses

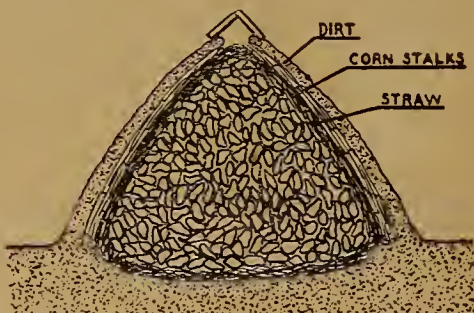
But, as I have stated, our farmers have abandoned this plan for some reason, and very few carry their sweet potatoes through to spring. Only last year the farmers hereabouts had to wait for vines to set their potato crop. For this reason there were none to go on the market early and bring the fancy prices which are generally paid for July and early August sweet potatoes.

Potato-houses can be used for storing sweet potatoes if they are to be used or sold out in a month or two; but for keeping them good and sound all the winter and well into the spring the bank is best if put up right and the potatoes dug at the right time, or when they are ripe. This is another reason for so many sweet potatoes being lost nowadays.

In 1911 I made a good crop of sweet potatoes, but I didn't dig them until December 1st. While I lost a good many, this was caused by the way they were put up. Like so many of my neighbors, I had abandoned the old-style bank for a mixture of house and bank.

The trouble with the house, I believe, is that it allows too much air-space.

Another reason why I prefer the bank to the house is that when the potatoes are



housed the mice will take to them, and not only ruin those they gnaw, but the "cbips" pile up on the others and mold.

The Old Way Best

With the 1912 crop I returned to the old plan of putting them up in cone-shaped banks with a straw and corn-stalk covering, then over this a layer of dirt, increasing the amount, or thickness of the layer, with the weather. At first I put on only two or three inches, then when cold weather came I put on two or three inches more.

When the mercury drops low, the hole in the top of the bank should be stopped up, but opened again when the weather gets warm. The rain must be kept out at all times, which is easily accomplished.



The tree at X can hardly be distinguished from the mass of rubbish about it. The chances are against it

GARDENING

By T. GREINER

Why Celery Goes to Seed

EARLY-PLANTED celery sometimes takes a notion to produce seed-stalks, and this spoils the plant for table use. Plants are more apt to do that when they have received a check in growth by lack of water in the soil or of plant-food. When the seed has been carelessly grown it may have a tendency to produce a large percentage of "bolting" plants; that is, of plants that go to seed rather than make good table celery. Always buy the best seed from a reliable seed-house. That is probably the surest prevention of the trouble. Next sow the seed in proper season (not too early), and push the plants right along to strong and uninterrupted growth by giving them plenty to eat and drink and high cultivation from start to finish. That is about all that can be done.

Manure Much Needed

Fifty, sixty and even eighty loads of old compost—those were the quantities of manure recommended by our expert teachers in gardening as the proper and needed annual applications per acre. Rather heavy dressings, it seems, and yet the figures are not much out of the way where the same piece of ground is cropped with vegetables right along. The purpose of these applications is mostly in two directions; namely: first, improving the texture, the water-holding power and "workability" of the soil, and, second, giving to the plants an abundant supply of available nitrogen with the other plant-foods. In almost every instance when I attempted to get along one year without fresh applications, relying on the heavy manurings given annually for some years previous, I found that I had reckoned without the host, and that my crops were short. Gardening without manure is up-hill work, almost impossible even for a short time, unless we can give up the use of the piece of ground for a season or two and put it in clover, at the same time applying a good dressing of mineral fertilizers. If we use several hundred pounds, each, of muriate of potash and acid phosphate on the clover-patch per acre in spring, cut the clover early and let it grow up again, then plow the second crop under in early fall, we can expect to grow a big crop of potatoes, sweet corn, cucumbers, cabbages, beans, Limas included, or perhaps beets, carrots or tomatoes the following year, even without applications of compost or stable manure. In all cases, however, it is worth while to use additional applications of a hundred pounds or more of nitrate of soda per acre on beets, spinach, lettuce, cabbage and cabbage-plants, celery and maybe others; these applications to be made broadcast while the plants are quite small, and perhaps repeated several weeks later.

As a substitute for the heavy manure applications plowed under, and usually quite effective, is mulching with good or moderate quantities of coarse or fresh manure between the rows and around the plants, for such crops as potatoes, beets, cabbages, cauliflower, tomatoes, berry-bushes and especially celery. It is a good plan to use the fresh poultry-droppings, as gathered from under the roosts every week during the summer, in lighter dressings around tomatoes, eggplants, Lima beans, etc., this way. Even weeds, marsh-grass, old corn-stalks, pine-straw or bedding of any kind can be used with advantage for mulch. Pick up all such stuff, and use it as a soil-cover. It will preserve the moisture for the plants during a dry time, and increase the nitrogen supply of the soil.

Black Rot of Tomatoes

It is a common experience to see tomatoes, more than half-grown, attacked by a black rot, this starting in the center of the blossom end and gradually extending until about half of the fruit may be consumed.

Some experts claim that this rot usually appears when the plants are suffering for lack of water, and that rains or artificial watering will prevent its appearance or spread. Others claim that it is more likely to attack the tomatoes in moist and "muggy" weather. I have seen it come in all sorts of weather, but on some varieties much more than on others. Spraying has not seemed to give much relief. When you find a good deal of this rot affection on a variety, better grow another that has been freer from it another year. Whenever I go through my tomatoes—and that happens about every day—I look for specimens showing signs of black rot. These I gather and destroy. My staked tomatoes appear to be less subject to rot attacks, but I find an occasional affected specimen. These tomatoes are of the Early Jewel type.

Which is Yours Like?

By Geo. W. Brown

FAILURE after failure occurs every year in the work of rejuvenating the farm orchard, not because we do not try, but because we do not try correctly. We buy the trees and we plant them. That is the end of our effort.

The average farm orchard is a poor place at best for the reception of young trees. There is tough sod, weed pests, orchard scales and insects, shade from older trees, hiding-places for mice and rabbits, and the pigs, old and young, calves and farm stock of varied kind, all have sway.

In the larger photograph we have a young tree trying to thrive under adverse circumstances. Weeds and grass invite mice. A nearby brush-pile gathered from the older trees harbors rabbits galore. A cottontail,



A winning fight is assured

arch enemy to young orchard trees, posed near its prey as we snapped the camera.

Compare this photograph with the smaller one, and note the wide difference in these two methods of performing the same work.

This small photograph shows the manner in which we believe young trees should be placed in an orchard of grown trees. The leaves of an old magazine protected the tree from injury by hares. The corral of stakes and rails keep off calves or pigs and serve to hold a heavy mulch about the tree roots. The sanitation of every tree by whitewash and spray-pump methods make sure the protection from scale, blight and insect pests.

It is a great art to laugh at another's misfortune, if the misfortune is a weakness for telling funny stories.

The weed that is suffered to go to seed on your farm this fall will bring its whole family to visit you next spring.

A War on Amoeba

MOST of us are familiar with the fact that the soil is inhabited by vast numbers of bacteria, or minute plants, too small to be seen by the naked eye; and that some of these bacteria carry on a brisk nitrate business—taking the nitrates from the free nitrogen of the air and placing them in the land. But we are not so well informed about the bad little animals that prey on the bacteria. The detrimental organisms may be so numerous that the bacteria will be almost exterminated. If we could heat the soil hot enough we could kill off the bad organisms—which are mostly little jelly-like animals called amoeba—and thus leave the field to the bacteria. Or we might poison them with vapors. Both these things have been done with much benefit to the crops. Some time we may be able to do them on a large scale with profit.

Crop News While You Wait

INSTEAD of government crop news getting to the crop-producers a week or fortnight after the data is received at Washington, this information will now go forward by telegraph to several States—namely, Illinois, Missouri, Minnesota, Iowa, Kansas and Texas—and be scattered broadcast through the daily press of these States when not over twelve to eighteen hours old. This improvement in crop-news dissemination will be tried out in the States named, and if well received will be followed in all the States.



The FARMERS' LOBBY.

Bogus Laws Won't Solve Many Problems

By Judson C. Welliver

A NEIGHBOR of mine who conducts a big dairy dropped in the other evening with a tale of woe and an assignment. "I have just bought a car-load of dairy feed," he began, "and the price was a bit higher than ever before. But it looks like the best article I ever got. The people selling it insisted that it rates very high with the government pure-food authorities, and I've been wondering whether the pure-food law has anything to do with stock feed. If it does I wish it could bear the prices some."

The food law has a good deal to do with the improved quality of stock-feeding preparations; but, needless to say, it can't do anything for suffering stockmen in the matter of price. As in the case of drugs and foods for human use, the national pure-food law aims only to prevent adulteration and misbranding of stock foods.

The halting and timid ways of national legislation on these subjects is illustrated most effectively by the distinction between the information the federal and the state authorities can give. If the state official has examined a given food and found it all right, he'll tell you so. Not so the national authority; it can only tell you about those that have been found more or less undesirable; even if it has analyzed a given feed and knows it is strictly honest and right, it can't give the honest manufacturer the benefit of the fact. Why the federal authority should be so limited, in such a strictly practical matter, is quite beyond me. But that's the way our timid legislators make altogether too many laws, some of which have little reason.

Food authorities tell me that the farmer who avails himself of the state and federal authorities' information is very likely to save twenty-five per cent. in value of stock food. That certainly is worth saving. One of the Bureau of Chemistry officials said:

"Since the vigorous efforts at enforcing the laws much better conditions exist. Many farmers nowadays feed scientifically; they know what a proper ration is for their purpose, and seek to buy it. Here comes a consignment of food on which the label says: 'Composed of wheat-middlings, shorts, red-dog flour, distillers' dried grains, linseed-meal.' No proportions of these various constituents are named, perhaps; the federal law doesn't require it, and some state laws do not. On analysis it is found, say, that there is no linseed-meal in the food at all. That is the most expensive of the constituents, and a very important one. Without it, the buyer probably would have rejected that food without a second thought."

Adulteration Makes Stock Feed High

"A very common adulteration is effected by putting cottonseed-hulls into cottonseed-meal. The hulls have almost no value, and not over fifteen per cent. of them should appear in a good cottonseed-meal. Yet we find as high as sixty per cent. of hulls. In such case, of course, the proportions of protein and fat are reduced correspondingly."

One of the real advantages that the farmer will gain by keeping in touch with the food-inspection work of our authorities is that he will presently know about what firms are reliable, and what are not. No manufacturer is justified in getting into trouble with laws as easy as those now on the books. In many cases indeed the manufacturers are not more than half to blame; they get careless, which they wouldn't do if the law held them up a little more strictly. For instance, a manufacturer concocts a formula for a dairy food that is designed to provide certain food elements. He has an analysis made of his product at the beginning of the season. That analysis is placed on all the packages throughout the season; but the actual content of the food may vary considerably.

Not any less important than the fight for honest stock foods is the crusade against bad insecticides and fungicides that the Bureau of Chemistry is just getting fairly organized. The insecticide law was passed in 1911, and is modeled after the pure-food law. It is a highly important act, too, for the agricultural interests. During the debates before it passed the statement was made on very respectable authority that it was possible to effect such a control over devastating insects and fungi as would save a billion and a half of wealth a year that they now destroy! Perhaps there is a bit of exaggeration in that; it is at least pretty apparent that if a new law should actually result in making the fruit, orchard and vegetable crop \$1,500,000,000 bigger the prices would go down somewhat in proportion. But no difference; the country needs the stuff, and if it can be saved from the bugs so as to increase the supply without hurting the producer it certainly will be a result much to be desired by all.

The insecticide business, when it gets into reckless hands, is very dangerous. Imagine yourself going to a hotel for a meal, and being served with a concoction of poisons. That is about what a lot of the insecticide-

makers used to do. They would get up a spray guaranteed to kill every insect on your trees, and when you used it you would kill every leaf on trees, shrubs and plants. Such experiences as that were by no means uncommon, the result of ignorance on the part of men getting up formulas. The victim of bad insecticides was liable to lose not only the current crop, but to have trees or vines killed.

The insecticide law is enforced by a board in the Bureau of Chemistry, consisting of one scientist, one chemist, one entomologist, a representative of the Bureau of Plant Industry, and one of the Bureau of Animal Industry.

The Square Deal for the Buyer

The chemists analyze every preparation, and require that the label must be just as specific and intelligible as possible, consistent with protecting the manufacturer in his formula. The label may be gotten up on either one of two theories. The manufacturer may name all the substances which are non-active—that is, which are not expected to kill the insects and fungi—and leave the buyer to guess what the active ingredients are; or, the label may give a list of the active ingredients, without being required to tell their proportions, or to name the non-active elements with which they are diluted. As a man on the outside, it seems to me that neither label gives the buyer a square deal. If the label is going to tell something that the buyer is entitled to know, then why shouldn't it tell it? The whole label business, under this law and the Pure Food Act, is a puzzle; a sort of pretense of doing something that isn't done at all. It's almost a lie.

The commonest ingredients in insecticides and fungicides are Paris green and lead arsenate. The chemist finds out what elements are used, then the entomologists try the thing out on living insects; flies, bedbugs, roaches, caterpillars, lice, or whatever it may be intended to exterminate. You will be interested to know that at the big experiment farm at Vienna, Virginia, where this work is done, the Government raises fleas, mosquitos and all manner of undesirables just to experiment

on. Not long ago the farm authorities had a big run of business in bedbug poisons, and, not having any supply of bedbugs on hand, hung out a notice offering two cents each for good thrifty bugs!

Fungicides are tried on living fungi with much care. In the case of dips for stock, these are tested chemically first, and then are tried on the animals.

As a result of the law's enforcement, the manufacturers are putting much more moderate and reasonable labels on their goods. You can't blazon forth the positive guarantee that half an ounce of our unparalleled dope will kill every undesirable insect in three counties. If you read the label carefully you can get a reasonable idea whether the stuff is good. Many of the more important manufacturers indeed have entirely rewritten their labels, adopting the language of the government authorities who examined and analyzed their products.

When the law was first enforced it was found that Paris green and the lead arsenates were of widely differing values. The bureau established standards of strength for these. In Paris green, white arsenic is much used as an adulterant; if used too freely it will defoliate whatever it touches. Not over three and one-half per cent. of white arsenic is now permitted, and the department has successfully prosecuted one offender whose goods showed seven per cent. The preparations that are liable to kill leaves or plants are pretty well suppressed now.

Here's Where the Scientist Wins

One of the worst offenses of the makers of these insecticides and fungicides was to advertise their goods as disinfectants. They would get out the most preposterous labels and advertising matter, making impossible claims about killing insects, etc., and almost invariably would add that the preparation was also of great efficacy for disinfecting purposes. As a matter of fact, almost without exception these preparations had no disinfectant quality whatever; none had enough to be worth mentioning. That sort of misleading allegation is now pretty well edited out of the labels.

The men in charge of administering these laws are, like everybody else in the scientific side of government service, enthusiasts. They want to do everything possible to protect the public, but they know that in some respects the laws that Congress gives them are not adequate. The scientific chaps almost always will be found to have very specific ideas as to what is needed and how to accomplish it. They will tell you the sort of law they need, and when the politician retorts that that kind of law can't be passed, the scientist shrugs his shoulders and goes ahead to do the best possible with such law as he can get. But in the long run things come to the scientist. Later laws vindicate his ideas.

THE fight for honest value in stock foods and for honest quality in stock medicines, insecticides and fungicides is demanding attention at the hands of the pure-food people. In general, the state laws are rather better than the national laws on the subject. The state and federal food authorities have been co-operating closely to make the best of what they have.

You will want to keep in touch with the situation in your State, and in the Nation as a whole. You can get that information by writing to Farm and Fireside, or to your experiment station.

There are circulars of information which you will be interested in. The Bureau of Chemistry, Department of Agriculture, Washington, D. C., publishes "Food Inspection Decisions." They will be glad to put you on their mailing-list to receive regularly these decisions. No two States handle the pure-food and drug problems in the same way, but no matter where you live nor how large a farm you own you may be in touch with the work that your State is doing—or isn't doing.





The Burden of Yesterday

By Adelaide Stedman

Illustrated by R. Emmett Owen



Chapter I.

THE girl rose nervously as William Drake entered his outer office. She was tall and slender almost to thinness, with a delicate oval face, gray-eyed and soft-lipped.

The man was obviously amazed to see her.

"I'm waiting for Miss Cumnock," she began, and in spite of her intense embarrassment he could detect the low, rich tones of culture in her voice.

"Mr. Cumnock expected to drop in," Drake recollected, "but—"

"His daughter will be with him," the beautiful voice broke in eagerly, "and I must see her about something! If I may just wait?"

"Why, certainly!" The fine, genial smile that so accurately denoted his character chased away the tired look from his eyes. The girl's tense, anxious manner excited his curiosity; but she so obviously did not wish to be questioned that with another smile and bow he walked away.

Re-entering his office, the tired expression returned to his face. It was late afternoon on the first of June. The date did not mean summer to him, it meant spring bills. Douglas, the chief clerk, a man whose growing family and suburban home kept him constantly "hustling," entered with the balanced accounts.

"Big month," he announced. "The New York branch of the Southwestern Acreage Company is some office."

He handed the slips to his employer proudly.

Drake nodded, pleased. "Good work all around. Tell Miss Fleming and Robert I said so."

Douglas went out. Before morning the whole building would know about the Southwestern Acreage Company's "big month." Drake, however, was very tired of being congratulated and told he was a "lucky devil" by men who were secretly wondering what in thunder he did with his money.

At five-thirty he was again obliged to enter his outer office. He had forgotten the gray-eyed girl, and his amazement was obvious at seeing her still sitting there, her gaze fastened anxiously on the clock.

"I'm afraid Miss Cumnock isn't coming," he ventured.

"So am I, and it's almost too late already! I don't know what you must think of this intrusion." She was painfully self-conscious and disturbed.

Drake didn't know what to think. He was conscious of a pleasantly stimulating curiosity. Anything to divert his mind from bills! He motioned her into his office and closed the door, to the bitter disappointment of Miss Fleming, the stenographer, and Billy, guardian of the switchboard.

"Now!" Mr. Drake exclaimed, pushing forward the big chair facing his desk and admiring the girl's erect grace as she seated herself.

"You are anxious about something, Miss—er—"

"Hamilton," she supplied instantly.

"Miss Hamilton, if I can be of assistance to any friend of Mr. Cumnock or his daughter—I—"

"I've tried to pluck up courage to ask you for one solid hour."

Drake smiled. All masculine, he enjoyed the shyness and awe in her voice.

"It's very simple, really," Miss Hamilton explained. "I came down-town to get a dress I'd ordered for my younger sister, Bernice, to wear at the graduation exercises at the Palisade School day after to-morrow. The shop made a mistake and put real Valenciennes instead of imitation in the dress, and that made it cost ten dollars more than I'd expected—and I—hadn't the money with me!" The inflections of her voice hovered between comedy and tragedy.

Drake's smile broadened, and the girl went on with renewed courage.

"There was no time to correct the mistake, as this is my last chance to get into town, so I thought of Ernestine, Miss Cumnock, right away. She told me before leaving school this morning where she was going. I tried to reach her at two other places before I came here. I was so sure of finding her. She was coming to invite you to her graduation. I don't know what can have happened!"

Mr. Drake was not listening as much to the words as to the speaker, so he was a trifle startled when she paused evidently waiting for him to say something.

"Strange!" he murmured non-committally, enjoying her pretty confusion as her eyes pleaded with him not to misunderstand.

"And I do so want to take the dress home," the girl continued. "You see, Bernice is—very young—she enters high school this year; and a new—frock is an event—now." The last word came hesitantly. "She has outgrown all of her white ones, so if she doesn't get this she won't be able to usher. You'd understand that calamity if you were thirteen."

Drake was folding a ten-dollar bill into an envelope as she finished.

"I'm sorry you annoyed yourself so over a trifle," he regretted, holding the envelope out to her.

Faith Hamilton rose, clasping the money eagerly.

"You know I wouldn't have done this for myself," she said simply. Then suddenly her self-possession wavered, the strain she had tried to conquer told, and her eyes filled with tears.

"It isn't easy for me to be brave," she murmured with a crooked little smile, "but I promised Bernice!

Now, I must go. The shop closes at six." Her confused glance rested on the envelope. "I'll return this—to-morrow—and try to thank you better."

In a moment she was gone; a few minutes later Drake followed her to the street, deciding to walk part of the way home. Why had Miss Hamilton's absurd little story sounded as if it hid something pathetic? Who was she? What was her connection with the Cumnocks?

Drake walked up-town, musing. The girl had exhaled a rare sweetness. She had seemed fragrant as flowers are fragrant, in token of their nature.

At Twenty-Third Street Drake finally climbed aboard a Broadway car. Hand in a strap he was jerked homeward. His relaxed face looked worn, dull, dissatisfied, but he thought he was only tired.

At the subway station near his apartment one street-vender was selling flowers, another the paper windmills children love.

The flower-vender flourished his bouquets. Drake stopped, bought a cluster of flowers and two of the windmills, and so laden entered the brick, iron and steel structure he called home.

Chapter II

WILLIAM DRAKE was not surprised the next morning when a knock at the door interrupted his toilet. For many years at the beginning of every month his mother had come to his room for a confidential chat. It was a survival of the days before the infirmities of age had transferred the household management from her to her daughter-in-law.

Mother and son exchanged a kiss, then Mrs. Drake mechanically threw back the bedclothes and opened



The girl rose nervously as Drake entered his outer office

the windows before seating herself where she could see her son's face as he stood before the mirror adjusting his tie and collar.

"William," she began, her head shaking a trifle in the manner of the old when suffering from extreme agitation, "I don't believe I can stand it another month!"

"What's Laura been doing now?" Drake laughed a little helplessly.

"It's no wonder you're imposed upon," his mother exclaimed indignantly. "You deserve to be! But I've seen that—that woman send one son of mine to his grave because of her reckless extravagance, and I can't stand by and watch—" Her voice broke.

Drake laughed again. From long experience he had learned the sensible thing to do. There was no use in arguing with his mother on this one subject. It was a monomania. Her oldest son, Herbert, had been her idol, and he had undoubtedly been helped toward his fate by his wife, pretty and brainless as a kitten. Mrs. Drake could never forget that fact, never forgive it.

She watched William in silence for a few moments, noting the details of his worn clothes; the tie which was not strictly à la mode; the old-fashioned cuff-links which had been his father's. A sudden uneasy memory that Will had been something of a dandy in his youth stirred her.

"Son," she began again, going to him and putting one wrinkled hand on his arm, "you're not sacrificing yourself for us, are you? Sometimes I can't sleep

nights, worrying about you. I never should have asked you to provide for the children and Laura. She made her own bed, and she should have been forced to lie in it! But the thought of Herbert's wife and children lacking for anything—made me—"

"Mother! Mother!" Drake patted the frail hand on his arm comfortingly. "I believe you do lie awake nights thinking up things to worry over!"

The old lady laughed a little, as he always forced her to, but the strained expression in her eyes did not change as she harped.

"I can't bear to see you imposed upon. You've been the best son and the best brother—"

"Haven't I the best mother?" he parried, catering to her almost childish love of compliments. He knew her hard life, the financial struggle of years, the dignity and character with which she had met reverses and the gradual breaking down of her moral stamina caused by living with the daughter-in-law she so justly despised. No hint of his worries ever reached her.

The two descended to the pretty dining-room. Mrs. Drake's eyes immediately fastened themselves on a bowl of peaches adorning the center of the table. She turned to her son, her head shaking again with helpless wrath!

"Ordering peaches when they're so expensive, even the millionaires on Fifth Avenue aren't eating them yet!"

Drake strove for his usual jocular manner, but a quick nervousness he had noticed often of late seemed taking possession of him. If only he could have peace!

"Don't bother, Mother; peaches won't break me!"

"It isn't that! It's the principle of the thing! For a woman in her position to—"

"You might let her forget her position once in a while."

"Forget it!" Mrs. Drake was indignant. "As if she ever remembered it. If I didn't watch—"

She stopped abruptly as Laura and her two little girls entered the room, with bright "good-mornings." Florence, the older of the children, her grandmother's chief joy in life, had Herbert's mild, attractive face, while little Betty was her mother done in miniature.

The maid passed the cereal, the sugar and cream. The children were given milk for their oatmeal. Mrs. Drake caught little Florence's eyes following the cream-jug wistfully. Immediately she looked grimly at Laura's saucer brimming with creamy richness.

"Here dear," she said, "you take my cereal, I don't mind milk."

Florence eagerly prepared to make the exchange.

"Milk is more wholesome for children," Laura protested.

"Cream is very nourishing," Mrs. Drake insisted, giving Florence her plate.

Drake's nerves seemed to quiver under the note of combat in the women's voices.

"Then buy enough to go around," he suggested with hasty cheerfulness.

"Mother says it's too expensive," Laura explained sweetly.

"Certainly." The older woman's voice was acid. "I don't mind sacrificing myself for the children." Again her eyes sought her daughter-in-law's cream-filled plate.

Laura's face turned scarlet. With a vicious little movement she set her dish down before little Betty.

"Eat that this minute!" she ordered with nervous harshness. "Do as I tell you!"

The child began to cry, frightened by her mother's tone.

William Drake turned white. For seven years he had endured such scenes.

"Can't you and Laura bury the hatchet?" he turned to his mother with a kind of desperate patience. "I'm able and willing to have you buy all the

cream you want for yourselves and the servant and the cat!" He felt his self-control slipping away. On one side he was faced by a pathetic shrunken figure and palsied head; on the other, by the appeal of child-like helplessness, staring at him out of wet violet eyes.

Suddenly his words sounded violent. He felt weak, empty, as if the strength had been sucked out of him. "This is disgraceful—in—front—of the children—" he muttered disjointedly, with shaking hands taking up his newspaper.

Laura's little red tongue moistened her lips. She was not afraid of her brother-in-law, she knew of the promise he had made to Herbert, to care for her and the children, the thoughtless, boyish promise made in the flush of generous success. Laura knew it would remain unbroken. She could afford to pretend hatred of her dependent position, to adopt a pathetic pose.

"Don't you suppose I realize what a burden I am?" she lamented. "But what can I do? I'm not clever; I couldn't earn enough to keep soul and body together." There was reproach in her voice.

Drake fidgeted. He understood Laura's selfishness, her ingratitude, her desperate clinging to the nearest prop, which since her husband's death had been himself, yet illogically enough he always believed that she actually suffered from her dependent position, and he was sorry for her. Her blond, forlorn prettiness as she stood before him there, self-accusing, humble, utterly disarmed him. [CONTINUED ON PAGE 26]

The Corn Lady

The Corn Lady Writes to Her Sister About Interesting Her School in Selecting, Harvesting and Storing Seed-Corn

October 9, 1913.

DEAR SUE—In your district, as in mine, the biggest crop is corn. It always makes me so glad when I see great stretching corn-fields with rows of stalks like ranks of brave soldiers carrying heavy burdens, the great ears bending down because of their own weight. I like corn. This time of year, when it is just ripe and the wind is beginning to rustle in its browning leaves, it seems to be speaking forth all kinds of messages of bounty and plenty to me. And it sings always the same chorus, "The farm is the best place, the very best place, to be."

It is getting time that these ears should be picked for next year's seed if we are to keep on increasing our yield per acre in this district. But the farmers are so busy I guess they haven't thought how soon the first frost may get here and kill some of the seed germs. To-morrow morning I am going to tell the oldest one in each family to go out in the field of corn at home that night and select the very best ear of corn they can find for seed and bring it to school the next day. I'll remind them of it just before they go home at night too. Then I am going to call up Mr. Smith, over our party line, just after supper and ask him if he will come in for opening exercises the morning the children bring the corn and explain to them the importance of hand-picked seed-corn, why it should be picked now, and how it should be stored. I think by the time we have done all this that almost everyone will be remembering to get out in their fields and select their seed-corn—even my Tennessee farmer, who is the worst forgetter that I have. He has a fine boy, though. You just wait a little while, for that boy is going to use a whole lot of gray matter on that rented farm of theirs, and to good purpose.

We are going to put our corn up in our Farm Corner, hung in the right way so no ears touch and there is good ventilation all around them. Then on Friday afternoon after recess we are going to have a corn-judging lesson of our own, using the score-cards that are sent out from the state college of agriculture. A few of the big boys are still out of school on account of the fall work, but they will

all come Friday afternoon, and I am going to help them plan for some reading at home so they will be ready to take up their work when they come in the winter.

I have had one of the circulating libraries from the state university sent down. It has been made up from books of interest to farm boys and girls, and I am going to open it on Friday when the older boys and girls are all present, so each will have a chance to take home a good book. You know you have these libraries in nice neat cases free. In some States you have to pay the express or freight, but here we did not even have to pay that. My directors signed the request for them, so the district would be responsible. I am going to have an Honor Roll for all the boys and girls and young people twenty-one or under in my district this winter. To get on the Honor Roll they will have to read at least five good books and give a review of the one they like best at our literary society. When we have read these books we will send them back and get some more.

We have found some good books on corn. There is a very complete study—"Corn," by Bowman and Crossley—that tells everything anybody ever did know about corn, I guess. Then there is the "A B C of Corn Culture," by Professor Holden. It is only a little volume, but goes right to the point in a practical way. We find both of these of great use in these days when we are so surrounded by corn and so interested in it.

Did you know the average yield of corn in this great corn State of ours is only thirty bushels per acre? Yet many of our best farmers raise seventy or more bushels, and a boy down in South Carolina raised two hundred and twenty-eight bushels on an acre. I know our schools can arouse an interest in corn that will mean many more bushels per acre in our districts, and it is a part of our job to do it.

I know you will do your part, for you always have been so interested in Daddy's ear-to-row plot and his other corn-breeding plot. Dear Daddy, I wonder what he ever does these days out in California without any corn.

Lovingly yours, HELEN.

The Housewife's Club

Pear Butter—The principal charm of this method of making pear butter lies in the fact that it does away with all stirring. To three bowlfuls of peeled and quartered pears add two bowlfuls of sugar and one of water. Cook until thoroughly tender, then take out the pears and mash them. Return them to the syrup, and cook for twenty minutes. Pour into cans while hot. I use a large yellow bowl as a unit of measurement, as it is my custom to make this butter in large quantities. E. W., New York.

Carrot Pudding—One and one-half cupfuls of flour, one cupful of sugar, one cupful of suet, one cupful of raisins, one cupful of currants, one cupful of potatoes (grated), one cupful of carrots (grated) and one teaspoonful of soda. Steam three hours. L. E. W., Ohio.

Sweet-Potato Pudding—Grate three medium-sized raw potatoes; add three eggs (reserve one white for meringue), one and one-half cupfuls of sugar, one cupful of sweet milk, butter the size of an egg and a little salt. Mix well, put in greased pudding-dish, and cook until brown; stir, return to oven, and brown again. Make a meringue of the egg-white and one-tablespoonful of sugar, and brown slightly. D. W., South Carolina.

Green-Tomato Pickles—One peck of green tomatoes, sliced, and four onions, chopped. Sprinkle over them one cupful of salt, and let stand overnight. In the morning drain, add six green peppers, chopped, three pints of vinegar, one quart of sugar and mixed spices as desired. Boil together very slowly until cooked, and can. B. C., Kentucky.

To Raise Bread—Your hint in FARM AND FIRESIDE some time ago as to putting a jar of warm water in the bread is very good when the bread is mixed in a large pan. However, if a mixer is used I find it an excellent plan to set the mixer into a pan of warm water and cover the whole with a heavy bread-cloth. MRS. R. S. F., Texas.



A Personal Word

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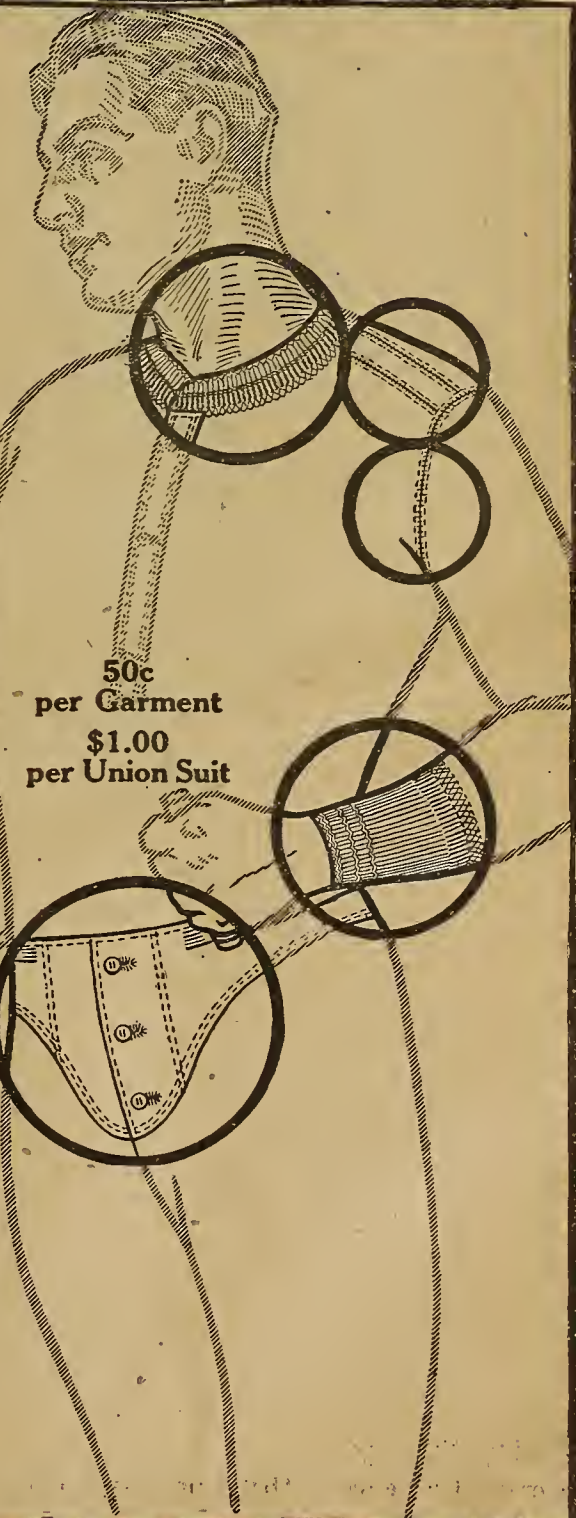
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Sunday Reading

By Merle Hutchison

The Retreat to the Wilderness

Sunday-school lesson for October 12th: Numbers 12.

Sunday-school lesson for October 19th: Numbers 13; 1-3 and 17-33, and 14; 26.

THE turning back of the great Hebrew caravan that had traveled nearly two years to reach its promised refuge, and the sojourn in the desert for eight and thirty more years, seemed to me, when as a child I first read the Bible story, a most mysterious performance.

For four hundred years the tradition of a wonderful land of their fathers had lived, like a folk tale, among the Egyptian slaves. They had tilled and sowed and reaped for their masters, and gained nothing for themselves for all their labor. But ever before them lay the land which should be their own; the fruits and the grain and the cattle upon a thousand hills were to be theirs and their children's.

Gathered at last on the borders of this country, they waited the return of the twelve spies sent out to reconnoiter. Fancy the excitement when bunches of grapes so large as to be borne between two men were shown to a multitude who had not seen a fresh vegetable in two years! The report of the land equaled all the tales of their childhood. To-day the traveler finds there valleys whose steep sides are covered with vines bearing grapes of wonderful size, figs, pomegranates and olives. But the more desirable the land, the more frightened the spies. They had found men of stature in possession. The Egyptians to whom they were accustomed were a short race, and the Hebrews themselves, after their centuries of slavery, probably not large. The reports of giants and of walled cities spread through the timid host. In terror they revolted. They refused to march. They cried wildly that they would return to Egypt.

Back to Their Wanderings

To attempt battle with such soldiers was hopeless. Even Moses and his steadfast helpers, Joshua and Caleb, were powerless to put courage into such hearts. Bitterly Moses had to admit that this generation would never be able to conquer Canaan. He ordered a retreat to the wilderness, and here, with the sudden, unreasoning and dangerous change of front that is characteristic of the mob in all times and all places, the people determined to go forward. Go forward they did till they met the enemy, when they fled, a terrified horde, back to the protection of their rejected leader.

When the Israelites went first into Egypt they were a shepherd people. Bedouins in reality, dwelling in tents and moving from place to place, as the needs of their flocks and herds demanded, so that the years of wandering on which they now entered were the life of their own forefathers. Between them and their homeland were a warlike and determined people. Until they had outgrown the cowardice bred of slavery, they were no match for such foes. There was nothing for them but to subsist in a nomadic life, as did their neighbors and kinsmen until they should be grown strong enough to conquer Canaan.

Forty Years of Missions in Japan

Epworth League Topic, October 12th

JAPAN is much to the fore just now, and we in the United States think of her perhaps with not quite easy consciences, knowing that whatever may be in the end found just as to Japanese immigration, our method of attacking the delicate subject was about as complete a specimen of bad manners as one need desire. It is therefore with a certain humility that one considers the results of missionary work in that wonderful land.

Mission work met in Japan different circumstances from those in any other heathen country. In China and in Turkey, because the missionaries have been quite the most intimate foreign element, it is easy to see the revolutionary effect of Christian teaching. But Japan swallowed western civilization at a gulp and, in adopting it, adopted many of the results of centuries of Christian effort, without any more direct missionary influence than there is with a child brought up amid the surroundings of a civilized land. Also, when Captain Perry disturbed her satisfied calm in 1853, Japan had already a civilization that was not only assured, but was in many respects very beautiful, so that virtues that have

to be slowly and patiently taught in South Africa were already the A B C of life in the Flowery Kingdom.

Christianity Has Taken Firm Hold

It is more than forty years since Protestant missionaries went to Japan. They were there in 1859, as soon as any foreigners were allowed. Freedom of worship, however, was accorded forty years ago, and with that came the wide movement among all Christian denominations, that has sent to Japan hundreds of preachers, teachers, doctors and nurses. There are now a hundred thousand members of Christian churches, which means twice that number of people of Christian affiliations and sympathies.

In 1549 Roman priests came to Japan and labored there for eighty years. Then they were driven out and the relentless persecution of their converts began. Yet the faith was never utterly destroyed. In 1869 a traveler tells of meeting on the Inland Sea a vessel carrying four hundred Catholics, the descendants of these Sixteenth Century Christians banished to some of the outlying islands. The law of the land, in force until forty years ago, read, "So long as the sun shall continue to warm the earth, let no Christian be so bold as to come to Japan; and let all know that the King of Spain himself, or the Christian's God, or the great God of all, if he dare violate this command, shall pay for it with his head."

This year, in writing of the recent friction between our two friendly nations over the California Land Bills, Count Okuma, one of the great statesmen of Japan, not himself a Christian, said, "Diplomacy or law or statesmanship will not work in this case; the power of Christianity, the teaching of the brotherhood of all men and universal peace, alone will save the threatening situation. Christianity is stronger in America than in any other country, and the concerted efforts of the Christian workers here and in America will achieve what we all have at heart." This is the contrast of forty years, and shows more than any statistics what missions have accomplished.

How to Make Religion Attractive in the Home

Epworth League Topic, October 19th

A RELIGION is known by its fruits. If these be love, joy, peace, gentleness, it is a good religion. If they be discourtesy, dissension, meanness, degradation, it is a mighty poor religion or none at all.

A woman devoutly reared in the Church of England once married a Congregationalist. After thinking the matter over earnestly she decided that it would be bad for the children to see Father and Mother with separate church interests, so she gave up the service she so greatly loved and went cordially to the church of her husband's Puritan ancestors. The character of the individual Christians in the household is the main influence. This it is that determines whether the members of that home look on religion as the source from which comes what is strong and what is lovable.

There are, however, further aids. Those ancient and beautiful customs of grace before meat and family prayer are the natural expressions of a definite faith. They have not only an immense influence in keeping the life of the spirit present to the thought, but they strengthen and make sacred the family ties. Making attendance at the services of the church and the various church activities matters of united family concern adds an interest that individual effort cannot give. We are past the time when Sunday was a day of repression or dullness. The one danger now is that it lose all distinctive characteristics and be no better than Saturday afternoon. It should be made happy. There should be family customs and pleasures that belong just to that. These grow up naturally if one have the desire in mind. They need not be forced, but they must be encouraged and guarded. Then that first clause in the definition of "true religion"—"To visit the fatherless and the widow in their affliction"—has more than we often think to do with the attractiveness of religion in the home. The bond between those who play together is strong, but it is not so strong as the bond between those who work together, and the children who have grown up helping their elders in kindly deeds and sharing with them an interest in the welfare of other people, and the progress of great movements will never look back on the religion of their homes as either barren or bearing but knotty fruit.

The One-Piece Dress Again

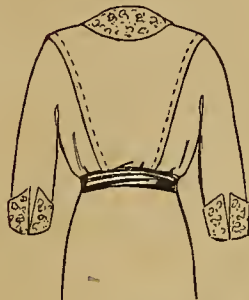
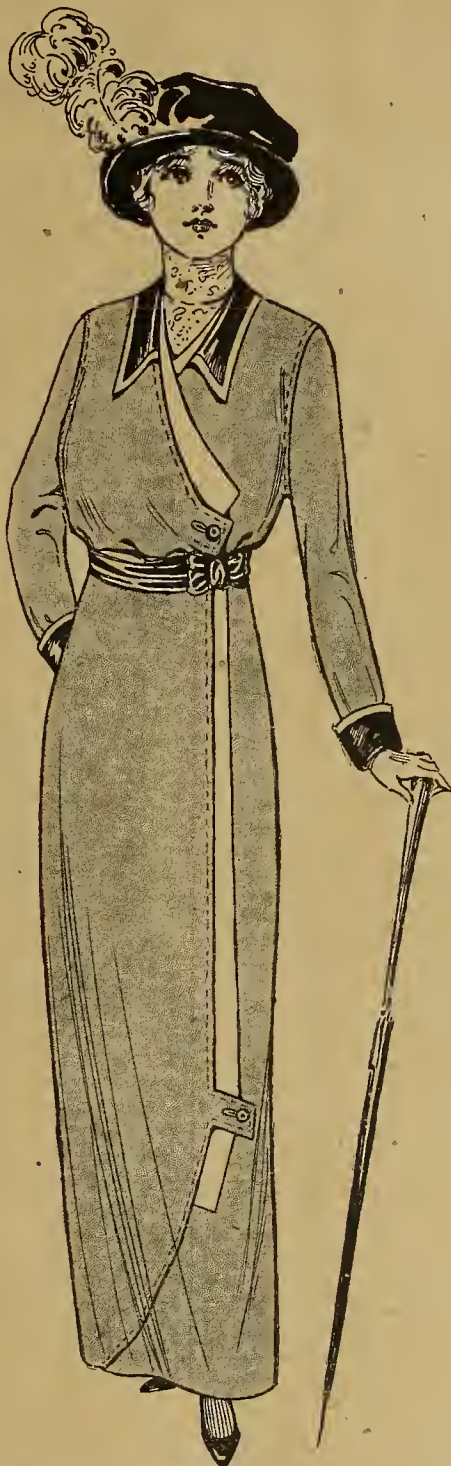
Its Practical Features Have Won for It Popularity

Designs by Grace Margaret Gould



No. 2351—Blouse with Deep Girdle Effect

32 to 44 bust. Material for 36-inch bust, two and one-fourth yards of twenty-seven-inch material, or one and one-fourth yards of forty-four-inch material, with three fourths of a yard of forty-four-inch contrasting material and three fourths of a yard of fifty-four-inch net. Pattern, ten cents



No. 2352—Surplice Blouse with Kimono Sleeves

32 to 42 bust. Material for 36-inch bust, three and one-fourth yards of twenty-seven-inch material, or two and one-fourth yards of forty-four-inch material, with one-half yard of contrasting material and three eighths of a yard of tucking. The price of this pattern is ten cents



AS THE separate coat is in great favor this season, the one-piece dress still holds its popular position. The design shown in patterns No. 2358 and No. 2359 is especially good looking and one that will appeal to any woman who is in need of a new one-piece dress. While this costume conforms to all that is new and up-to-date in fashion, there is nothing about it that is extreme. The sleeves are set into large armholes plain. At the wrists they are a little full and gathered into broad turnback cuffs. The skirt gives the effect of an overskirt, without the trouble of making it or the need of extra material. In the center back there are slight gathers, which make it both graceful and comfortable. At the lower edge in the twenty-four-inch-waist size it measures two yards, which though narrow is yet wide enough to appeal to even the most conservative woman.

For a practical costume this design would be effective developed in wool poplin, serge or soft worsted, in some dark tone of green, blue or brown, and to give it the bright color note so necessary in a smart dress this fall the collar, cuffs and girdle may be of bright blue,

green or gold toned satin, with the trimming-band of black satin or plain cloth the color of the dress material.

Again a most attractive afternoon and church costume may be made like this design, developed in soft satin messaline, broadcloth or one of the crepe materials, with the collar and cuffs lace, and the girdle and trimming-band in the bright tone.

Taupe, tan, odd shades of blue and reseda green are colors that are much used for dressy costumes this season.

As the patterns of this dress are adaptable, there are several different ways of making it, all of which are clearly and carefully explained on the pattern envelopes.

Another attractive one-piece dress is shown on this page in patterns No. 2379 and No. 2380. This design is especially suited to the soft crepe wool and silk materials and would be very pretty if the dress fabric were brocaded, with the shoulder drapery plain, but in the same color.

The separate coat, No. 2394, is particularly smart in cut and is suitable for dress occasions as well as every day if it is made of some dark-toned fabric.



No. 2379—Waist with Shoulder Drapery

32 to 42 bust. Material for 36-inch bust, two and one-eighth yards of thirty-six-inch material, three fourths of a yard of chiffon, five eighths of a yard of thirty-six-inch contrasting material and one-fourth yard of net. Pattern, ten cents

No. 2380—Tucked Skirt: Peplum Effect

22 to 32 waist. Material for 24-inch waist, three and three-fourths yards of thirty-six-inch material. The width of this skirt at the bottom in 24-inch waist is one and three-fourths yards. The price of this skirt pattern is ten cents



No. 2173—Sailor Suit with Notched Collar and Kilted Skirt

4 to 12 year sizes. Material required for 8 years, five yards of twenty-seven-inch material, or three and three-fourths yards of thirty-six-inch material, with one-half yard of contrasting material. This pattern, ten cents

No. 2358—Surplice Waist: Sleeveless Guimpe

32 to 42 bust. Material for 36-inch bust, one and three-eighths yards of fifty-four-inch material, with one-half yard of plain satin, one-half yard of crepe moire and seven eighths of a yard of net for sleeveless guimpe. The price of this pattern is ten cents

No. 2359—Three-Piece Skirt: Tunic Effect

22 to 32 waist. Material for 24-inch waist, two and one-eighth yards of fifty-four-inch material, with one fourth of a yard of crepe moire for band. Width of skirt at bottom, two yards. Price of pattern, ten cents

Farm and Fireside patterns cannot be purchased through stores or agents. They may only be ordered from our three pattern depots. Order from the depot nearest your home. The depots are: Pattern Department, Farm and Fireside, 381 Fourth Avenue, New York City; Pattern Department, Farm and Fireside, Springfield, Ohio; Pattern Department, Farm and Fireside, 1554 California Street, Denver, Colorado



No. 2216—Buttoned-in Front Dress: Large Armholes

6 to 12 years. Quantity of material required for medium size, or 8 years, three and three-fourths yards of twenty-seven-inch material, or two and seven-eighths yards of thirty-six-inch material. Pattern, ten cents



No. 2394—Cutaway Coat with Raglan Sleeves

32 to 46 bust. Quantity of material required for 36-inch bust, six yards of thirty-six-inch material, or four yards of fifty-four-inch material, with five eighths of a yard of contrasting material. Matelasse coating, brocaded and plain wool velvet and corded velour are some of this season's new fabrics which are suitable for this coat. Price of this pattern is ten cents



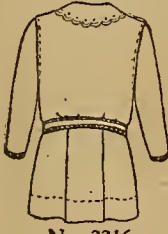
No. 2379
No. 2380



No. 2173



No. 2358
No. 2359



No. 2216



No. 2394

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A Ride in the Clouds

By G. Henry

ROYDEN and I thought we would go into the woods to see the chipmunk, but we couldn't find him, and so went farther looking for the woodchuck. The woodchuck was not at home. So we walked and walked, picking up nuts. By and by we could see the river.

The river was very pretty, for it was shining and had blue with white streaks and little ripples on it. So we went right down to the edge of the bank and stuck our toes into the water, but it was terribly cold.

We were talking about the chipmunk and the woodchuck and my swing at home and Royden's automobile for a long time. Then Royden looked up and saw a big black cloud that was riding in the air and scowling and puffing at us. But we weren't afraid!

"Come down here, cloud, and give us a ride," I said, and Royden laughed at me. But I said it again, and that big cloud just swooped right down close to us, and before we knew it we were sitting in nice soft seats with plush rests for our arms and pillows for our heads, and we floated and floated away through the air just like they tell about angels.



We went, oh so far over the river, and up the river, and across to the country on the other side of the river. We could see people down on the earth, and once Royden said he saw a fish jump out of the river to look at us—and I guess it is so, for Royden called to the fish, "Come on, fish, come and ride with us."

But I guess fishes don't ever ride in clouds or any other way—unless they have carts under the water!

And then we rode on our cloud over the city, and I could see horses, and women like Mommie, and men like Dad-die. Some of them were working, and some of them walking, and some of them talking and laughing and playing—but most of them seemed to be working, and those who were working were not laughing or talking, many of them.

Then I asked the cloud: "Please, cloud, haven't we gone far enough, for it is time for us to go home."

And the cloud turned around, and we had such a fast, fast ride! We could see the sun through the cloud umbrella over our heads, and the sun was very beautiful and helped to keep us warm. But we rose so high we could not see the river any longer. And we were not afraid, for a cloud that was so good as to give us a nice ride would not hurt us.

And by and by a voice—it must have been the engineer of the cloud—said: "Now I will take you back. You have learned that clouds do not always mean rain, and that sometimes they are good-natured."

But Royden says we had only been asleep.

And my Mommie laughed and laughed till she almost cried when I told her this story about our ride in the cloud.

Baby Hints

By Mame Griffin Dunn

AS THE strings on baby's hood are apt to become soiled before the hood proper, it is well to sew flat buttons on the inside of the cap and work a button-hole on the end of the string. As the strings launder easily, they can be changed three or four times before the cap itself needs laundering.

Never clean baby's finger-nails with the sharp point of the scissors. Take, rather, a toothpick which is blunt enough to keep from injuring the tender flesh. Never bite off baby's nails, as the ragged edge left by so doing will work an unsightly scratch.

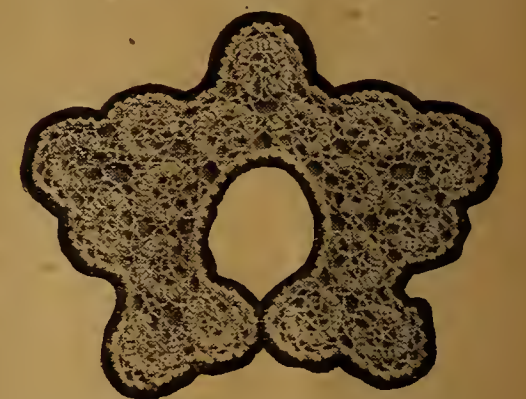
A very dainty slip for the baby's pillow was made from a piece of India linen sixteen by twelve inches. The only adornment was a small initial in the right-hand corner and a narrow frill of lace around the outside. A prettily embroidered handkerchief with a back of cambric or lawn would also make a cheap and dainty pillow.

For the baby who is just starting to creep make little slippers out of scraps of eiderdown. They cost less than five cents a pair, are warm, can be laundered and take the place of store booties or slippers that cost from twenty-five cents up. My friend makes them after any little bootie pattern, adding individual touches.

A Child's Coat-Collar

By Evaline Holbrook

A CROCHETED collar always is an adornment to a child's coat, whether the latter be for autumn or winter wear. It makes out of a plain cloth coat a very dressy little garment, and as most mothers are now planning warm clothes for their children, they will welcome this pretty pattern for a collar which will soften the effect of a heavy garment. Full directions for making it will be mailed upon receipt of four cents and a



stamped envelope directed to the buyer. Address Evaline Holbrook, care of FARM AND FIRESIDE, Springfield, Ohio.

Book Reviews

Modern Farm Buildings, by Alfred Hopkins, is an excellent book for the owner of a country estate and for farmers who wish to have their buildings of pretentious appearance. The book is handsomely illustrated. 206 pages. \$3 net. McBride, Nast & Company, New York City.

The Scientific Feeding of Animals, by Prof. O. Kellner and translated from the German by William Goodwin, is a semi-scientific treatise of feeding-stuffs and animal physiology. Maintenance and fattening rations receive special attention. 395 pages. \$1.75 net. The Macmillan Company, New York City.

Farm Boys and Girls, by William A. McKeever, is a well-written book covering the training of farm boys and girls. It deals with education, social life in the country, business training for boys and girls and useful knowledge that the

young farm men and women should have to make their lives most comfortable and complete. 321 pages. \$1.50 net. The Macmillan Company, New York City.

Leading American Inventors, by George Iles, contains the portraits and biographies of the men who were responsible for the principal labor-saving devices of to-day. 432 pages. \$1.75 net. Henry Holt & Company, New York City.

Farm Management, by G. F. Warren, is a good book on handling a farm to make it most profitable. The author has apparently left out detail undiscussed. 583 pages. \$1.75 net. The Macmillan Company, New York City.

The Farmer of Tomorrow, by F. I. Anderson, is a new book dealing largely with political economy as it affects the farmer. 308 pages. \$1.50 net. The Macmillan Company, New York City.

The Experience Bazaar

Editorial Note—Here is an open market for the exchange of experiences. Will you not bring your problems and leave them behind? Will you not give and gather the fruits of experience? To give freely and take gratefully is to live wisely.

DEAR FIRESIDE EDITOR—In your paper of May 24th is an article entitled "Better Babies on the Farm," and in the issue of August 16th there is an editorial "Better Babies Again," followed on August 30th by a long and delightful editorial on the same subject. I am very much interested in this movement for better babies. I think it is a good idea to go back and begin with the fathers and mothers. Talk with our farmers and see how careful they are in breeding their best stock. Do they take their choicest young heifer or mare and turn her loose, or do they separate her, leaving her quiet and cared for until she shall bring forth her young?

Lower Than the Beasts

In the home it is different. The wife is not cared for in the same scientific way. She is expected while bearing children to continue her usual duties as wife. Can we have healthy, happy mothers and wholesome babies under such conditions? I once heard a physician say, "Surely man has fallen lower than the beasts," and the testimony of thousands of women shows this to be true. What is the result? Mothers worn out and unable to care for their children.

Women have been taught they must submit, and men that they have a right to demand. Is it not time that such teaching should stop and that women should secure their husbands' protection?

If this thought were presented to men and women in the right way it seems to me they would be ready to act on it.

C. M.

DEAR FIRESIDE EDITOR—When a housewife does her own work economy of time is important. My eldest baby was only two and one-half years old when the third was born. My husband is the best of men to help care for the little ones and help around the house, but, except for his help, I do most of my work myself, and I take many short cuts.

Short Cuts

In winter I keep open only the rooms mostly in use, and the other part of the house has to be swept and dusted only every two or three days.

I gather and prepare my vegetables the afternoon before I cook them. The next

morning I wash with the vacuum washer about ten minutes, then they are ready for the rinse.

My ironing is done by folding all of the every-day underwear, sheets and counterpanes and putting a large book on top to press them.

Work May Be a Pastime

As my children grow older I teach them to wait upon themselves, which saves me many steps. My eldest is not yet four years old and can dress and undress herself and younger sister, goes on errands and can take a straight message.

She has a stool that she presses on when I'm ironing and is learning to fold and press neatly. These duties are not obligatory, but a little work is a pleasure and a pastime to a child.

Save Time to be a Good Mother

My grandmother would consider me a lazy woman because of my short cuts, but life is too short and time too precious to spend in unnecessary drudgery.

I have plenty of time to attend to my chickens and turkeys, which I raise for home use and market, and also some time to read, write and spend socially.

When my children are grown up I want to be young enough to see things as they see them, and not too old and worked down to appreciate their amusements and pleasures.

MRS. B. F. POWELL,
Georgia.

DEAR FIRESIDE EDITOR—We have a ten-months-old baby who laughs and crawls and plays all day long, has never been cross five minutes in her life and has never cried hard but once—that was when she fell off the bed. A great many have said to me, "I never saw such a good baby."

Consider the Stomach

When I remember that all of my four were like that always, and that none of them is ever sick, I want to tell the secret of my success to those mothers who are worn out caring for cross babies.

The diet is all-important, and yet, despite this fact, many babies are fed at the table at the age of six or eight months. When the food does not make them really ill it nevertheless makes them nervous and peevish and lays the foundation for future illnesses.

Every doctor knows that a child under two cannot digest food that contains starch. When every mother knows that, there will be fewer cross babies.

Nothing to Cry About

An eminent physician has recently said, "Feed one generation of babies properly, and the next generation will have no need for doctors."

Our "good" baby has never had a taste of anything but milk and water. Her health is perfect, and I mean to keep it so. She will have no food until she is two years old except milk, chicken broth, codded egg, the juice of peaches, prunes and oranges, crusts of dry bread and Graham crackers. She is fed regularly every four hours.

Our baby has had, and will continue to receive, a tub bath every day. She coos herself to sleep and wakes smiling. She is so comfortable there is nothing to cry about.

PEARL CHENOWETH,
Kansas.

Care in the Cellar

By Kizzie Hays

THE cellar should be considered more when we are filling it for the winter than when the rubbish is being disposed of in the spring. Who cares to go into a cellar that has been carelessly and disorderly filled and that is so full of the combined odor of its contents that he is relieved on reaching the door, where a pure breath of air can be had? Let us consider a few things that might be helpful to some in storing away and keeping the vegetables and fruits.

Order is very necessary. There should be plenty of bins and shelves on the sides. A double row of shelves or a large receiver might be placed in the middle of the room, leaving ample room to walk around. When boxes and barrels are used, avoid putting them on the floor; place them a few inches above. By all means never dump vegetables in a pile on the floor, nor carelessly pitch things near the door inside, where some may think they will be handy. Such means,

in the long run, will cause much trouble and confusion. Classify your winter supply, and arrange it accordingly. Leave room to get to everything easily, and a little room for additional things that might call for space.

Clean cut from the garden the vegetables should be. Leave unnecessary soil, leaves and stems in the garden, and do not bring them to the cellar to make more work or to decay. It is a mistaken idea that the more dirt, stems and leaves about the vegetables, the better they will keep. Vegetables and fruit that are tending toward decay should be taken care of elsewhere, and not placed in the cellar to make foul the air, to make impure the other things, or to endanger the lives of those who may be thrown in contact with the impurities. Make everything look attractive. Filth will never do that; cleanliness will.

Air the cellar occasionally. The rest of the house is not so often forgotten, but how about the cellar? Open it to sunshine and air as often as you can. When that is being done it is a good time to examine your supply and discard what has become unfit for use. A few minutes at odd times will keep a clean and healthful cellar. Otherwise, it is a dangerous place which will breed diseases and perhaps cause death.

What Shall We Do with Garbage?

By S. R. Quigley

IF YOU live in a small town and keep no pigs or chickens, or if you live in the city where the garbage system is poor, burn your kitchen scraps!

Potato-parings, orange and lemon rinds, eggshells and such refuse should be wrapped in several thicknesses of newspaper, making an oblong bundle, and tied with twine. Or, it is very convenient to drop parings or plate-scrappings into a paper sack and roll it up. When the fire is blazing nicely put the bundles in—not too many at a time. There is no smoke or stench. Sweeping litter is also easily disposed of in this way. If the cooking is done entirely with gas or oil, these paper bundles can be burned on the trash-pile in the back yard. An ingenious small boy in a cleanly home took pleasure in erecting a "brick oven" with a small smokestack for crematory purposes, in the back yard.

Small Change

The people you and I live among are the ones we can get most help from.

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I have plenty of time to attend to my chickens

morning I boil them on the wood stove while I am cooking breakfast and put them into the fireless cooker. I either bake bread and potatoes enough at breakfast to have cold for dinner or make a fire about an hour before dinner-time and bake warm bread and biscuit or things requiring a short time to cook.

I sometimes use my fireless cooker for a warmer. Chicken, grits, gravy, etc., put into the cooker hot will keep nice and warm for the next meal.

Why Not Cook Every Other Day?

In cold weather, when vegetables, cooked meats, etc., will keep fresh until the next day, I cook dinner every other day. The second day I warm the vegetables, add some extras and a dessert and have a nice, warm dinner which requires little time for preparation. Our suppers are almost always cold.

We have plenty of warm milk, corn-bread, light bread or biscuit, with butter and fruit preserves.

This is the Way I Wash My Clothes

The regular washing I hire done because water is not convenient, but I wash a few things for the children two or three times a week. With my rapid vacuum washer it is an easy job. I soap the clothes with naphtha soap and soak them in warm water drawn from the reservoir of the stove. After soaking about half

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DON'T BE WITHOUT IT

The Burden of Yesterday

[CONTINUED FROM PAGE 20]

The maid brought in the mail. Bills principally. Drake put them in his pocket, trying to hide their bulk. He wished no more discussion.

One letter had come for his mother, and now Mrs. Drake looked up from its pages so triumphantly that her son was startled.

"Listen," she commanded; then as her voice faltered she handed the letter to William, saying in a quiver of joyful excitement, "You read it, I can't. It's from Jobyna Price, my second cousin!" Drake proceeded curiously.

"MY DEAR HILDA—I am addressing this letter to you so that if you think the suggestion in it would be unacceptable it need go no further. I am still not very strong after my attack of nervous prostration, so I must be as brief as possible. My doctor, a beardless young scapegrace, declares that pills and powders won't do me any good—that what I need is *young society* and a *fresh interest in life!* Now, my dear, I know that young society isn't going to seek out a cranky, middle-aged old maid, nor is it going to come for pleasure. Doctor Pierce says take a baby from the orphan asylum, but excuse me! As soon as I got fond of the little brat some disgraceful parents would turn up to blackmail me!"

"However, I am a lonesome old woman, and do want someone to love. Last night Laura and her children occurred to me. I know their circumstances, so my plan might have mutual advantages. If Laura and her youngest, little Betty, will come out to the Willows and live with me, I will adopt the child and make both of them comfortable in every way. I have given this matter due thought. Laura's bright, attractive ways amuse me, and the little one is like her. If you think they would put up with a crabbed old creature, who perhaps only needs a little love to smooth out the wrinkles in her disposition, talk the proposition over and let me know. Of course, little Florence can be with her mother on and off always."

"Very faithfully,
"JOBYNA PRICE."

There was intense silence for a moment when the letter ended. In the hearts of mother and son was delighted amazement; in Laura's blank consternation.

"What an opportunity!" Mrs. Drake exclaimed at last, still a little dazed.

Drake's face beamed with pleasure. "Bettikins will be an heiress!" his mother proclaimed. "Jobyna Price is a fine woman!"

Laura sat speechless, a set smile on her face. She was in a ferment of revolt, as if a great steel trap had suddenly snapped on her. She got to the Willows! She knew the Sunday quiet of that remote countryside! What if Betty would be rich when she, Laura, would be too old to enjoy the money! Give up the city life which was meat and drink to her, to live with a crabbed, set, old maid. Never! Never! Never!

Drake went to her and put his hands on her shoulders caressingly. "Well, Goldilocks," he laughed gently (Goldilocks had been Herbert's pet name for her), "the tide has turned at last, hasn't it?"

Laura began to sob. Even Mrs. Drake was softened by what she considered Laura's joy.

"I'm going to take Florence to visit my sister for six months," she announced in tones of triumph. "We'll vacate the apartment and leave William free for once!"

The dining-room clock struck nine. Drake turned with a buoyant youthfulness he had thought gone. Gradually a sense of what this morning's change might mean came to him.

"I must be off."

Laura looked up with a white face. "I won't go!" she started to say passionately, but something in the bright, relieved look that unconsciously shone in her brother-in-law's eyes arrested the words. However, in her heart, she coldly determined to find some way out of the dilemma.

It was a day riotous with life and the sunshine poured in an electric flood into his office as Drake signed checks balancing his books. In spite of the "big month," when all his obligations were met there was little left, for Drake, besides his up-town expenses, had recklessly signed notes for his brother's debts; notes on which he would be paying for years to come.

But this morning these facts did not depress him. Laura was provided for; his mother would have peace! He relaxed in his chair comfortably. Rest for the moment was all he wanted.

Billy appeared in the door.

"Mr. Cumnock," he announced.

"Show him in," Drake ordered. Mr. Cumnock was a friend of his early Arizona days, who came to New York occasionally. Now his coming reminded Drake of yesterday's incident, and his curiosity about Faith Hamilton reawakened.

Mr. Cumnock, a portly, well-dressed man, entered, followed by a young girl, dark, piquant and charged with that certain intense aliveness called vivacity.

"My daughter Ernestine," Cumnock announced, in the midst of his bluff greeting.

Drake shook hands with the young girl, wondering what explanation she would make about Miss Hamilton.

"I just dropped into this little one-horse town to see Erny here graduate," Mr. Cumnock explained, as they seated themselves. "I've got to hear her play her thousand-dollar piece and read her three-thousand-dollar essay!"

He laughed proudly. "They've cost me all of that, and then some, but they're worth it!"

Ernestine had hardly listened. She was busy extracting two big white envelopes from her handbag.

"I want you to see me graduate too, Mr. Drake," she said finally. "I haven't forgotten that you recommended the Palsade School to father, and I've been so happy there."

She held up the invitation, then went on with pretty shyness.

"I haven't made it out yet. I—I forgot to ask Father—and it's been such a long time, I—thought—perhaps you were married—and had a—daughter—or someone." She paused, her cheeks bright with color.

"I'm still an old bachelor," Drake answered, preoccupied. Why didn't Ernestine mention Faith Hamilton? Was it possible that the girl was an impostor?

"Ernestine will be dreaming about marrying you from now on I guess," Mr. Cumnock broke the thread of Drake's self-questioning. "I'm getting ready a good, strong barbed-wire fence to put around her. I want her in my corral for a while!"

Ernestine made out the invitation, then, rising to give it to Mr. Drake, she broke out suddenly.

"Oh, wasn't that funny about Faith Hamilton?"

Drake's heart gave a great thump that amazed him.

Ernestine held out the other envelope she had taken from her bag.

"Faith asked me to give you this and to thank you again. She said she never was so embarrassed in her life and that you were *perfectly lovely* to her! Wasn't it lucky you were here? Father and I changed our plans and went to a matinee."

Drake's curiosity was unappeased. He accepted the offered envelope, a dozen questions ready to be asked, but Ernestine was not to be interrupted.

"You will come to my graduation, won't you?" she questioned. "The exercises are really *very* pretty. They are to-morrow afternoon at three."

"I'll take you up in my car," Mr. Cumnock offered. "I've got one. It goes with the summer place I've taken on the Hudson. Pretty soft, eh, for an old Arizona cow-puncher?"

Drake accepted the invitation, laughing at himself as he did so. What possessed him to go to see a score of young girls graduate?

"Oh!" Ernestine exclaimed suddenly, as she looked from the window. "I've never been so high up before!"

"New York's a sight from the top of the Singer Building. Would you like to go up?" Drake questioned.

"I'd just love to!" the girl exclaimed so enthusiastically that her father and Drake smiled at each other as Drake rang his bell.

"Ernestine loves a good many things just now," Mr. Cumnock remarked. "Chocolate peppermints, John Drew's acting, these loco new dances and her old daddy sometimes, eh?"

He laughed proudly as she approached and patted his cheek with one little gloved hand.

"My secretary will take you to the tower," Mr. Drake explained as a young man entered. "Miss Cumnock, may I present my private secretary, Mr. Lewis. Mr. Cumnock you know."

In a moment the two young people had left the office.

"Now we can talk a little business," Mr. Cumnock suggested. "Ever since irrigation made that old pile o' dust I owned worth about twenty-seven times what I ever expected to get for it I've been laying ropes to get hold of another piece. I think I've found it just across the line in Mexico. In a few months I'll be ready to talk business to you about selling it."

"Good!" Drake exclaimed. "I'd like to make a little extra money."

His voice was so eager that Cumnock's eyes looked a question.

"Just in case," Mr. Drake parried lightly, amazed at his own levity. "I should fall in love with one of the sweet girl graduates!" [TO BE CONTINUED]

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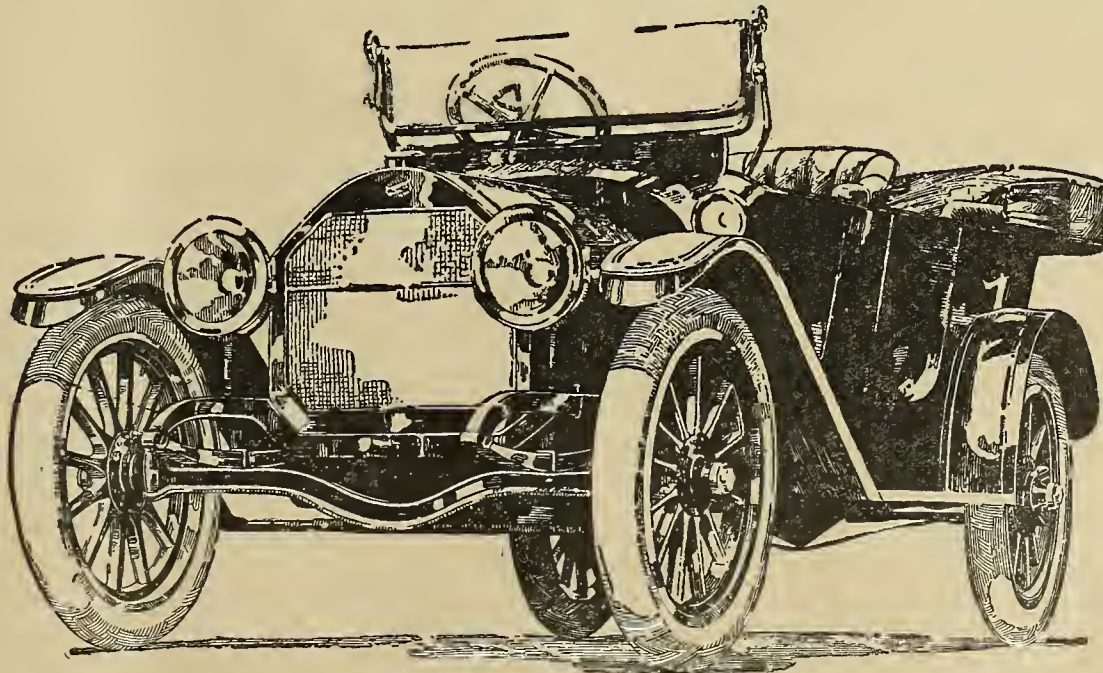
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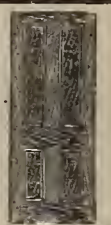
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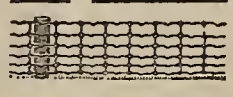


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FARM AND FIRESIDE

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Boys will be boys

DON'T MISS
THESE GOOD THINGS
SOON TO COME!

Dairying by the Square Mile

Have you ever done work on this basis? The dairy farm is usually the small one, and it ought to be a profitable one. In this discussion we have profit and size combined. You may well anticipate this article.

How a Preacher Studied the Dollar

No, not to be able to secure it for himself, but to find out how farmers looked at the money they made. You'll be interested in reading this article on rural finance by a rural preacher.

"With the Hope That Saint Nicholas Soon Will be There"

We hope that there are no "SPUGS" among our readers. "SPUGS" are people opposed to giving Christmas presents, and who banded themselves together last year into a society for the Prevention of Useless Gratuities. They seem to be relatives of Scrooge, to whom Charles Dickens introduces us in "A Christmas Carol." For those who love the blessed spirit of the season, and who feel that time, strength and a little money are happily spent on those once-a-year messages of love called Christmas presents. FARM AND FIRESIDE has prepared several pages of helpful suggestions: "How to Make Twenty Gifts for Three Dollars." "How to Trim a Tree for One Dollar." "The Special Opportunities of the Country Dweller." "How to Give Every One What He Wants." There will also be a page of simple carpentry to help the boys fulfil their share in bulging the Christmas stockings.

An Automobile and a Girl

This is not fiction, nor a tale of love, but a story of plain facts about a California girl who uses her machine to take the produce of the farm to market. She has several handy ways of manipulating the machine to get results.

How Shall We Earn Our Livings?

The duty of equipping herself for self-support belongs to almost every young woman. Shall she study music or kindergartening or stenography? What commercial opportunities are offered her by the home-making talents? How do these compare with teaching or office work as a means of support in the big world outside? Miss Thum's carefully analyzed observations may be a surprise, but they carry conviction.

A Bag of Nuggets

There is going to be a page called "The Counselor's Grab-Bag." Put in your hand and draw out nuggets of advice: "How to Use Your Electric Flatiron." "How to Make Aluminum Cheap." "What Some Women Do with Their Flour and Sugar Bags."

Getting Corn Under Difficulties

Or, did this man get his results in the corn-field easily? We will leave you to decide that question. At any rate a field which was very unproductive was made to yield bumper crops of corn. The story is coming.

Teachers, Weeds and Alfalfa

The Corn Lady will talk to school-teachers about weeds. Miss Field is a woman who has always served her country, by making boys and girls and men and women see where true values lie. First she did it as country-school teacher, then as county superintendent. She is now busy with a still broader and more fruitful work, the organization of Young Women's Christian Associations throughout rural districts.

Peanuts for Those Who Want Them

Previous articles in FARM AND FIRESIDE about peanuts have brought forth so many letters that we have secured from an Oklahoma farmer his experience in raising peanuts and in feeding them. He markets his peanuts through live stock.

A New Use for the Sun

Who of us would not be glad to have a little of our hardest work well done by somebody else? Up in the sky is a great, lazy-looking, dazzling globe called the sun. Of course we know it warms us and lights us and feeds us, but what does that amount to? Suppose we could make that sun really work—make it sterilize our chickens, preserve our tomatoes and provide us with candies? Mr. Charles Barnard has taken the sun into his employ, and he will tell about it.

WITH THE EDITOR

"The Best Crop for This Locality"

question in my mind that it is the very best crop we can raise in this locality. It will stand any amount of wet weather, which most of our crops won't stand, and at the same time get results under the dry conditions we have had lately."

Alfalfa will stand almost any amount of wet weather, if it is growing in well-drained land. But it will not survive even a short period of standing water, either on the surface of the field, or about the roots. The farm in question is underdrained and will grow alfalfa in very wet years.

"As you know," he continues, "my own acreage in alfalfa was eighteen acres, and I got thirty loads the first cutting, twenty-six the second, and twenty the third. If we had had plenty of rain we would have had more the third crop. The first crop followed excessive rains in the spring. It is safe to say that each of these loads was at least one ton, so that you see I got in the season four and one-third tons to the acre."

Three years ago this stockman, who farms about 1,100 acres of the finest land in Ohio, was not much in favor of alfalfa. He is a very progressive farmer, but, like most of us, he was running along in the old corn-wheat-clover fashion. He had two men feeding for him—one an old colored man who had been with him a long time, and the other an agricultural-college man. He also had a few acres of alfalfa. There was a contest on between the old colored man and the expert as to which could put more weight per head per month on their respective herds. The first month's weighing showed the expert in the lead. The next weighing put the colored man so far ahead that the expert wondered how it could be. Both herds had good, running water. Both had plenty of good timothy and clover hay. Both had all the good corn they could manage. Was the old negro a better feeder than the college man?

It seemed so; but the expert, being scientifically educated, began looking for the reason in a scientific way. He found that the only difference was to be found in the fact that the crafty old colored man had been systematically mixing alfalfa-hay with the ration! The protein in the alfalfa had been going into the muscles and bones of the cattle he fed.

The Feed That Makes Cheap Beef

A good stockman needed no further proof as to the value of alfalfa over timothy and clover. Acting on this proof, he began working into alfalfa. He plans to build more silos, and as soon as he can will make his feeding ration one of corn-silage, ear-corn and alfalfa-hay. This ration is shown by the tests at Lincoln, Nebraska, to be the feed that will make beef cheapest. I saw the Nebraska herds when the demonstration was explained to a collection of Nebraska feeders, and the superiority of the silage, corn and alfalfa-hay was plain from an inspection of the steers and a study of the records of expense. But my Ohio friend is coming to suspect that his best way is to put all his immense crops of corn into silos, feed silage and alfalfa-hay, and balance the ration up with cottonseed-meal.

The fertility he would buy with the meal looks good to him; for he is covetous of fertility. "The last three weeks," he writes, "we have been busy with six or seven manure-spreaders, with two extra men in the yards shoveling, and have already hauled 1,800 three-horse loads, and have a week more before we get it finished. We shall have at least 2,500 loads. It will enable me to cover 125 acres as thick as the manure-spreader will cover it."

He applies a liberal amount of commercial fertilizer with every sowing of small grain—which means at least once in three years—"whether the land needs it or not." The land shows the results of this treatment.

"My first field of alfalfa," he writes, "was eighteen acres. With the additions I have made I shall have over forty acres next year; and before I get through the entire 110 acres will be in alfalfa."

One Secret About Alfalfa

The above is the experience on the farm of Mr. Edwin S. Kelly of Yellow Springs. But it is not for the big farm only that alfalfa is the coming crop. A half mile up the lovely Sir John's Vale—the mountain valley in which my farm is situated—is a farm on which the owner is getting his eyes opened in a similar way. He has about three quarters of an acre of alfalfa, from which he has taken three crops of about a ton and a half each this dry year. I saw the third crop on the ground just before cutting, and I never saw better alfalfa in Kansas or Nebraska. This little field is worth more to this West Virginia mountain farm than any other bit of it ten times as big. Many of the neighbors have tried alfalfa, but failed to make a go of it. Inoculation! That is what the farm needs on which alfalfa is a new crop. The farm where the good alfalfa is growing has had a little of the crop scattered about on it for twenty years, and has gradually become inoculated with the germs needed by the roots. That's the secret.

I believe that we shall all have to work into alfalfa wherever it is possible, if we are to compete successfully with the farms which have it. Farming, after all, is intense competition. Those of us who grow the best produce cheapest make money.

Alfalfa the Bountiful!

We can't compete with the fellows who grow such a crop as alfalfa successfully so long as we depend on crops which are less bountiful. Suppose the man who cut his grain by hand had stuck to the cradle when the self-rake and binder came in. Where would he have been? In the hands of the sheriff, of course. For him labor-saving machinery would have been destruction—for it would have been in the hands of his competitors. So with alfalfa and similar new crops. The man who does not adopt them as fast as he can safely do it will fall behind in the competitive race and be worse off than he would have been if the improvement had never been thought of. Alfalfa for me as soon as I can get my land in shape for it!

Hubert L. L. L.

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FARM AND FIRESIDE



PUBLISHED BY
THE CROWELL PUBLISHING COMPANY
SPRINGFIELD, OHIO

Branch Offices: 381 Fourth Avenue, New York City, Tribune Building, Chicago, Illinois

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Entered at the Post-Office at Springfield, Ohio, as Second-Class Mail Matter

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Subscriptions and all editorial letters should be sent to the offices at Springfield, Ohio, and letters for the Editor should be marked "Editor."

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Vol. XXXVII. No. 2

Springfield, Ohio, October 25, 1913

PUBLISHED
BI-WEEKLY

That trees are the objects most frequently struck by lightning is the observation of Mr. F. G. Plummer, of the United States Forest Service. As the roots of a tree extend into the damp ground, a tree is more likely to be struck than any other tall object. A tree's form is almost ideal for conveying electricity from the air to the earth.

Why Not Collective Loans?

THIS paper is saying a good deal lately about rural credits, farm loans and cheap money for farmers. We make no apology for so doing. It seems to us about the liveliest topic possible. With a new currency system about to be adopted for the whole country, and a very effective President and Congress promising a Rural Credit Bill within six months, we should all give the matter some thought. In this issue is a discussion of land loans by Mr. Welliver. It will give our readers some light on the manner in which farmers in other countries have their wants supplied as to money. And it will make the average American farmer's mouth water to read it.

Since Mr. Morman's article was published, we have had many letters from members of Congress and senators about the matter. These legislators seem to agree with most of the farm papers in thinking that we can't have as cheap money as our European competitors because "American farmers will never consent to have bonds issued on all the lands of the organized unit of farm borrowers." That is, they say, we won't allow a bond issued that is a lien on not only our lands, but all the lands owned by the members of the borrowing association. We'll borrow on our own lands, but we won't allow our farms to be subject to debts for money loaned to others also.

Is this true? We don't believe it. We believe that when farmers realize that the way to get cheap money is for a large number to go in together and get it they will do so.

We have done it a thousand times in the past—to get money for other people. We have issued bonds to aid railways. We have issued bonds to build schools, to construct roads and bridges. In all these cases we have all been bound jointly. The million dollars voted for any public improvement is every dollar of it a lien on all the land in the taxing district.

What sort of a mind has a man who would be afraid of a proposition for raising money at four or five per cent., and which would be paid off, interest and principal, when fifty instalments had been paid?

The writer of this would like to join with other farmers and borrow a million dollars on that basis—he to have enough of the million dollars to represent sixty per cent. of the value of the farm.

He would be perfectly willing to let the bonds be a lien on his farm with the rest, as all other public bonds are, because he would know that such bonds, of which the principal would never fall due, and the interest would be low, would never in the world be foreclosed.

Why?

WILLIAM GIBSON was arrested as a tramp in Washington, D. C., recently. He told the court that he had worked on a farm "since he was a kid," and had left for good for city life. "Wouldn't you rather live among the beautiful things of the country?" asked the judge. "Not me!" said the boy. "I'd rather be in jail!" He went to jail for fifteen days. There is a reason for such things—and it is not to be found in any necessary features of farm life. What is the reason?

A Good Dog Idea

MR. GEORGE HASBROUCK of Ravenna, Ohio, writes encouragingly with reference to the editor's plan for solving the dog problem. "Your dog-gone idea is good," he says. "May it be worked into law!"

Well, if it's good let's not allow the law-makers to forget it. Here it is again. Let the present generation of dogs live under the present laws, or without any very Draconian statutes to plague them. Every man's dog is a good dog to him or his family, and to sacrifice him, even to the precious sheep industry, is impracticable. It touches the sentiments and feelings, and such a law cannot be enforced, and probably ought not to be. But it is no hardship on any of us to be hindered in acquiring new dogs. We have not yet learned to love the new dog, and if we never get him we shall be just as well off.

Therefore let us have laws everywhere under which all dogs shall be listed as exempt, in large measure, from additional disabilities. But new dogs—soak 'em

Ordinary bowel trouble in chicks is often mistaken for the deadly white diarrhea. The real white diarrhea, however, cannot be eradicated from the flock. When it appears the flock should be eradicated instead. Then wait a while, clean up, disinfect, change the range, and start over. The prevention is cleanliness.

Farm-Raised Power

SECRETARY HOUSTON has his hands full no doubt; and so has the entire Wilson administration. But the rather efficient way in which problems are being tackled leads us to hope that denatured alcohol for the farmers will not be forgotten. When the denatured-alcohol law was passed a few years ago "for the benefit of the farmers" it was carefully framed so that the revenue regulations were such that large plants were required in order to stand the expense. It should be so changed in the near future that small-scale stills may be operated.

An engineer of New York made the statement not long ago that some thirty-five-ton trucks which have been run with denatured alcohol have proven that it does more work for less money than gasoline. It can be made from almost any vegetable product which will yield a fermentable juice—potatoes, for instance, or apples. Under favorable laws those apple-trees planted in the past few years may compete with Standard Oil for the motor-fuel market.

Common Sense and Schools

CHILDREN should begin the study of agriculture at the age of twelve years. This is the belief of the greatest specialists in the world. At least such is the opinion of the International Congress of Agriculture, as evidenced by a resolution passed at the annual congress at Ghent, Belgium, last June.

Such being the case, the American schools are failures in teaching agriculture. We used to think that agriculture was a college study. Then the high schools took it up. Now it should be commenced in the common schools.

And yet there are men who are called educators in agriculture who oppose the Page Bill and favor the Lever Bill. The former would give federal aid to the common schools which teach the twelve-year-olds. The latter would extend it only to the experiment stations!

Japan the Monarch of Coal?

IF THE report is true that Japan has secured exclusive concessions to mine all the coal in China, it is a fact of tremendous importance.

A German investigator some years ago stated that China has enough coal to last the entire world several thousand years. And at a recent meeting of British scientists it was stated that the European and American fields will be worked out in about three hundred years.

The Japanese samurai has always in mind in training his sons that some time they may be called upon to fight for the conquest of the world by Japan. But if this story is true all Japan need do is to sit tight on the lids of her coal-mines and wait for want to conquer the world.

The Chinese coal-fields cover 30,000 square miles, and contain billions of tons of the best of coal, both anthracite and bituminous. They are the world's great reserve supply. Civilization cannot exist without coal. But probably the situation will not be as bad in a hundred years as it promises to be. By that time the human race will have come to recognize the truth that all lands belong to the whole race, and not to individuals. And Japan will have to sell the coal on terms of justice, or get off the lid.

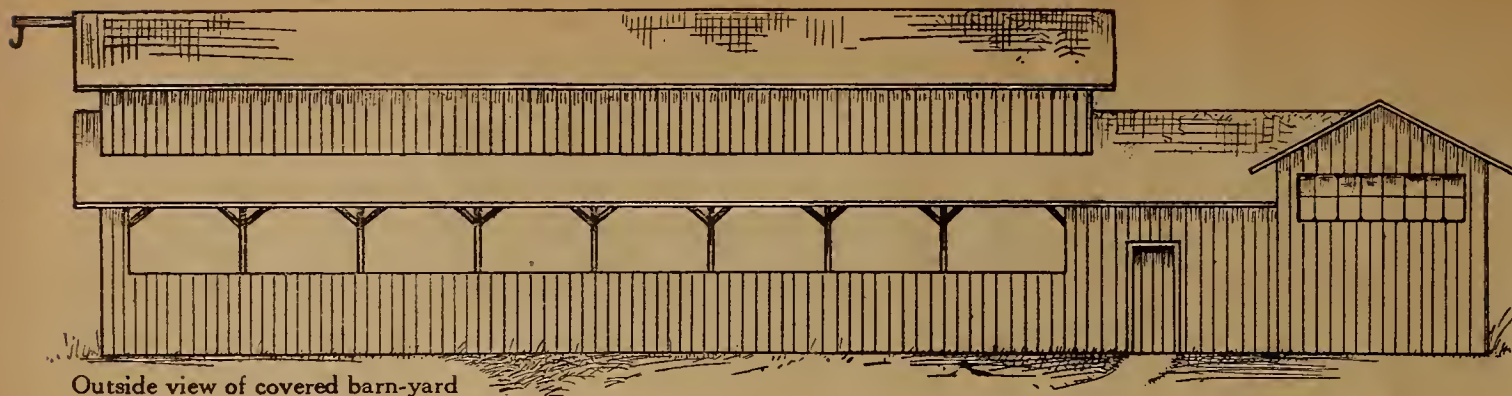


This fine Florida road was built by convicts. Making a community profit out of crime is a revolting thought; and the sight of men in striped suits is one which we should be sorry to meet in our rides and walks. But some States use convicts in road-making without the stripes, and allow them wages if they earn anything above the expense of keeping them. This is better for the convicts than prison life, better for their families, and better for the roads.

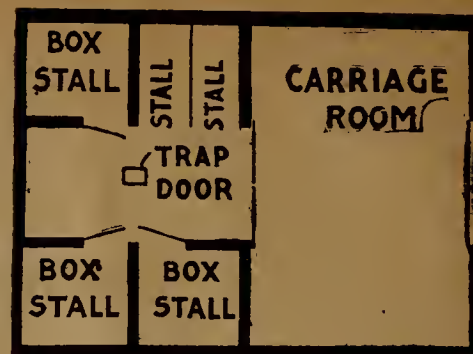
with taxes, penalties and licenses! Soak 'em hard enough so that all dogs added to the population will have some good reason for existence.

In five years most of the dogs now living will have lost their teeth and their ambition. In ten years the present generation will have vanished. And the mutt problem will be an easier one.

You may like your beefsteak rare, but there is danger in eating any meat not well cooked. Measles in cows leave boxed-up parasites in the bovine flesh. You do not notice them with the naked eye, but they are there, and if they are not killed by thorough cooking they will cause tape-worms in the digestive organization of the human system, and then follow associated diseases and discomforts.



Outside view of covered barn-yard



Once this was a carpenter-shop

The Convenient Barn, Old and New—By David Buffum

FARM buildings, as usually erected, are very often inconvenient and lacking in economy of construction. Though many examples of this are to be found everywhere, it applies more especially to buildings of amateurs and those new to the business. Experienced farmers make fewer mistakes of this kind, even if they have bestowed little thought upon the matter, for they usually follow certain conventional models, and these models, though often enough susceptible to improvement, have become conventional because embodying certain important features of convenience and economy.

Among all classes of farmers, however, a great deal of loss occurs through improperly designed buildings, not only as concerns their first cost, but from the constant loss in time and labor that is occasioned by their inconvenience when in use.

Let us first consider the matter of cost of construction. The building which contains the greatest amount of space with the least amount of enclosing walls is circular. Of rectangular buildings, which are the kind erected at least cost of labor, little argument is needed to show that the nearer square a building is the more space it encloses according to the area of its walls. I recall a hay-barn almost cubical in form that my father had built. The amount of hay it would hold invariably astonished those who filled it for the first time. A very simple illustration of the principle involved can be had by tying together the ends of a piece of string and then stretching it over four tacks on a board in an exact square. Now, using the same string, set the tacks so as to have the enclosed space only half as wide. The decrease in the amount of enclosed space is astonishing, whether figured mathematically or judged by what is apparent to the eye.

Now it does not often happen that a perfectly square building is as convenient as one that is somewhat longer than its width; but the principle should nevertheless be kept in mind by those who desire as much space as possible for the amount of material used. The fact, too, that the same roof will cover a building of given ground dimensions whether that building be ten or twenty feet in height shows the comparative costliness of low-studded buildings.

The Barn Can be Well Arranged Inside

In planning the dimensions and the form of the exterior, the interior arrangements must, of course, be kept in mind, and this, of necessity, will compel more or less deviation from the greatest economy of construction; but he who deviates so far from this as to have buildings that are both low and narrow, a form much used by wealthy amateurs, will be sure to find his buildings sadly lacking in space and convenience and, as a rule, necessitating far more labor than would be required in the taller and more nearly square building.

It is often argued that the taller and more nearly square building is lacking in grace and picturesque effect. If of good proportion this does not necessarily follow, as any good architect will tell you. But, even so, no building that poorly serves its purpose, however graceful its proportions, looks well to a man who is familiar with farm needs. For the farm building should first of all serve its purpose; and I know, from experience, that such buildings need not be unsightly or in any wise lacking in symmetry or grace of outline.

I know of a barn built a few years ago on a thousand-acre estate for the stabling of ten or twelve horses. It is constructed of stone and tiles, was designed by a prominent architect and is very handsome. But in order to get a certain low-browed effect which the owner desired the loft was made so low and cramped that not more than two tons of hay can be stored in it. When I pointed out this glaring defect to the owner he admitted that he had not thought of the desirability of putting in, at mowing-time, enough hay for the whole year, "but," he said, "the men can haul it in, a load at a time, from the other barn as often as it is needed." This, it can readily be seen, necessitates double handling of all the hay used, with the bare exception of the first two tons.

For economical building a few all-important points should never be overlooked. Chief among these are, first, storage room for hay, with a convenient means for filling the mows; second, a convenient way for feeding the stock; third, a convenient way of cleaning the stables and disposing of the manure, and, fourth, that these features be not attained at the cost of some equally important requirement.

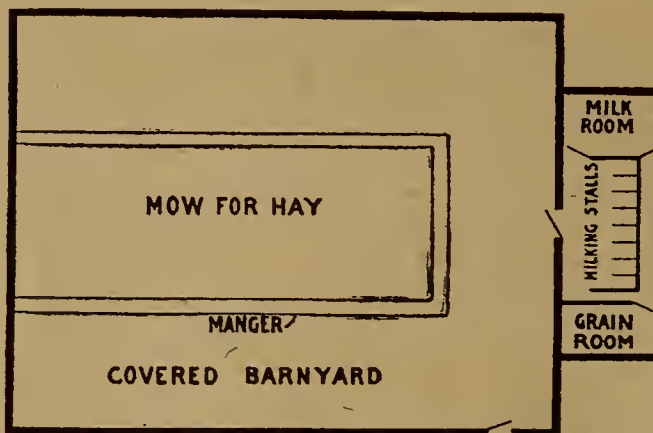
In the tall barns with cellars, so frequently seen on American farms, these requirements are all met. The

hay, put into lofty mows by power forks and carriers, is easily pitched down to the floor where the cattle stand; and the manure is thrown through trap-doors into the cellar. In such buildings one man can care for a herd as easily as half a dozen on plans where the buildings are low, the hay stacked in the yard and no advantage taken of the power of gravitation. But often these tall buildings embody exceedingly objectionable features. In many instances the cellar is far from dry; but even where it is dry a great mass of fermenting excrement, immediately under the cattle, is insanitary. There are ways, it is true, by which such a nuisance can be mitigated; but, as usually managed, the cellar manure-pit is a bad thing and always a temptation to slack methods.

See That All Conditions are Sanitary

Where a perfect drainage can be had and the manure is not allowed to accumulate, the barn cellar furnishes an exceedingly convenient way for disposing of it. In my own practice I have sometimes had a chute leading from the trap-door directly into a wagon, kept standing in the cellar merely to receive the manure and haul it out to the fields as soon as filled. But when it is desirable or necessary to store the manure for the winter, the manure-pit adjoining the stable on the same level is more sanitary and, with the use of manure-carriers, does not greatly increase the labor of keeping the stable clean.

The mow room necessary to hold a certain number of tons can be calculated approximately, but never exactly, as different kinds of hay vary in weight. And always bear in mind that extra space in height must be allowed, for in filling the mow there must be room



In this system cows are not tied except at milking-time. Hay is pitched directly from mow to manger

for the men to work on top of the hay. I recently saw a striking instance of this in a barn built by a young man unfamiliar with agriculture who had bought a farm and took up its management with much enthusiasm. His barn was built to accommodate a certain number of cows and to hold all the hay that his farm was said to produce. He had considerable contempt for what he called "the guesswork of the common farmer," and he had figured out everything to a nicety. After a very careful calculation as to the number of cubic feet of mow room he would require, he had his mows built accordingly. But, while they would perhaps have held the hay if full clear to the top and the

This system consists simply in keeping the animals loose in a floorless shed, where they are fed from racks or mangers. The droppings are not cleaned up every day, as in usual stabling, but are allowed to lie, and enough fresh straw is from time to time spread over the whole surface to cover them. This is a very easy matter compared with the daily cleaning of stables of the ordinary kind. The trampling of the animals upon the straw seals up the part underneath, and the place is much freer from odors than is the ordinary stable. Animals housed in this way also keep much cleaner than when tied up and require much less grooming. Ample ventilation is a part of the system.

For dairy stock the mere open run does not, of course, fill all the requirements, as a milking-shed is an essential accessory. But this need not be large, as only a few head need be driven in and tied up at a time. Their grain is also fed at milking-time.

The most approved form of building for the Erf system is of very large ground space, but strictly one story in height and having a comparatively flat roof. The construction is simple and can, if desired, be very inexpensive. The sides are either more or less open or provided with windows that are open most of the time. "Covered barn-yard" is the term used to describe such a building; and that is what it really is. Through the middle is a rick for hay, which is fed in long racks much as our forefathers used to feed in the open air around a stack.

Adjoining this "covered barn-yard" on one side is the barn proper, or milking-shed. This, as I have already stated, may be quite small, but it should have a room for grain, and it is a good plan for it to also include the dairy. Here the cows can be driven in, a few at a time, and milked and fed.

The Erf system seems to be slow to come into general use. But its value and economy have already been fully demonstrated; it is inexpensive in construction, and by it the labor of caring for a herd is reduced to a minimum. The best-kept "model" barn, as many of the costly new buildings are called, is rarely free from odors, and often odors that are out of all proportion to the care taken to avoid them; while in the "covered barn-yard," with its partly open sides and its well-littered ground, all odors are as nearly eliminated as is possible in any practicable system.

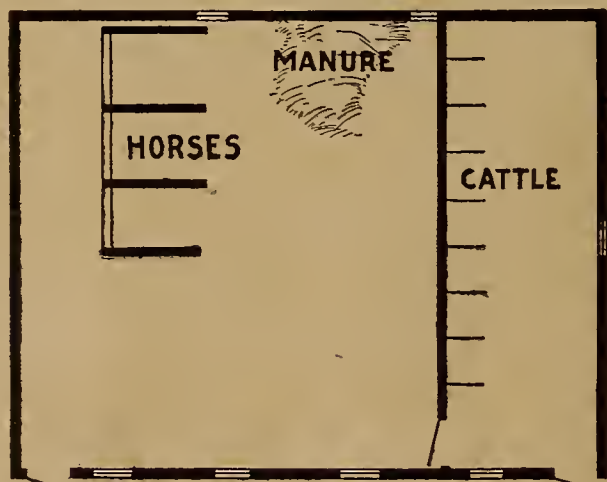
How to Do "Chores" in Less Time

But I am reminded that the overwhelming majority of farmers are constrained to get along with such buildings as are already on their farms. These buildings are often far too good to tear down, however much the owner may desire newer or better planned ones. So the proper adaptation of present buildings to convenient methods of doing the work in them is as important as the correct building of new ones.

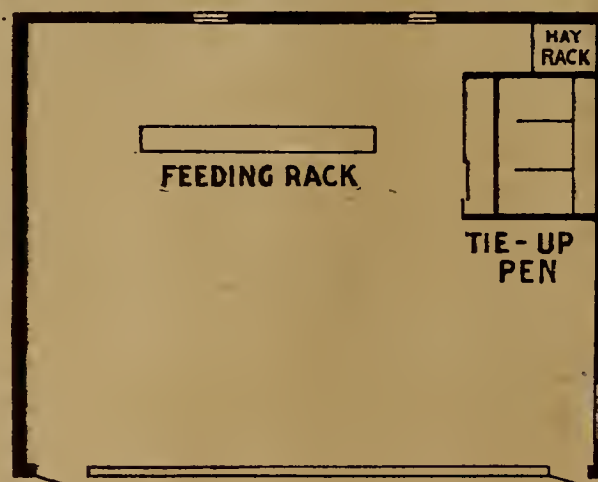
One of the first things to consider is that, as the so-called "chores" of the farm have to be done every day, the aggregate loss to the farmer is very great if their doing is attended by undue inconvenience and labor. For instance, if the watering-place is located at a considerable distance from the stable a great deal of time is lost in watering, to say nothing of the exposure in storms and wintry weather; and I have often seen the wagon-and-carriage shed not only located at a distance from the horse-stable, but also so constructed that the harnessing had to be done out of doors. But there are few farmsteads in which these objectionable features cannot be remedied, or at least

greatly improved, without any great outlay in money.

The lower left-hand diagram shows the arrangement of the fifty-year-old barn on a farm that I bought a few years ago. It was forty by fifty feet in dimensions, with a mow which occupied the whole second floor, into which the hay was pitched through wooden windows, of which there was one on each side. The lower story contained no floor, the cattle and horses standing with their hind feet in the mire, for it was impossible to keep the urine-soaked soil dry. There was no trap-door through which to throw down the hay to the



Ground-floor plan of main barn as we found it



After we adapted it to the Erf system it was arranged like this

hay firmly packed, they were only seven feet in height, and so could be only filled about half way up, and even this made hard work for the men who stowed the hay.

Before leaving the subject of new buildings let me say a few words about a so-called "new" method of stabling—the "Erf system," so named for Prof. Oscar Erf, who was probably the first to exploit it, though by no means the first to practise it. My father, a great many years ago, made use of it for his sheep and young cattle; and I myself, more than twenty-five years ago, used it for my sheep, my ponies, and also, to some slight extent, for my colts of larger stock.

ground floor; and for fifty years all the hay fed had been thrown through the windows to the ground outside and carried in through the door. Some fifty feet from the barn there was a shed for wagons and carriages, which had to be wheeled out of doors before harnessing.

I decided at once that the horses must be kept in a new place. For the cattle we simply tore down and removed all stalls and partitions, thus leaving one room forty by fifty feet in size. A trap-door in the floor of the mow (which took not over two hours in the making) allowed us to throw [CONCLUDED ON PAGE 8]



C. A. Vatcher, the owner, who puts on overalls and works with his men. Note the oblong hole near bottom of coop, through which the hens drink in winter. All coops face the south.

Hampshire, and the only one of its kind in the world. Its size, however, does not make it noteworthy so much as the devices and methods used, and the poultryman with half a dozen hens may receive as much benefit from it as the man with large-scale operations.

The farm is not operated on what most poultrymen would call scientific principles. In fact, men with the scientific bee in their bonnet will be grieved to find science sacrificed for business all through the method of management. Yet a \$50,000 business is done annually at a satisfactory profit.

The facts which make this farm of special interest are these:

- No male birds are kept, and no chicks are raised.
- No birds are kept for over a year.
- No trap-nesting is done.
- Scrub hens predominate, and no effort is made to secure pure-bred birds or any particular breed.
- The hens never set foot on the ground, being continually confined.
- The houses are cleaned out only twice a year.
- There has never been any sickness in the flocks since the poultry-farm was established in 1876.
- All of the feed is purchased, and only two commercial products are raised on the farm, eggs and Baldwin apples.
- There is no rotation of crops, yet the land is constantly becoming richer.

In 1876 C. E. L. Hayward established this farm in southern New Hampshire, where the business is still conducted. It comprises seven hundred acres, most of which is rough, stony land. Mr. Hayward was the originator of the type of poultry-house which has been used on the farm for the past twenty-five years, and which is now known through New England as the New Hampshire A-shaped poultry-house. He died a



A portion of one row of coops. Observe the rocky nature of the land. Many of the rocks too large to move are used as part of foundation for the coops.

few months ago, and the business is being continued along the same lines by his son-in-law, C. A. Vatcher.

At present the farm has 4,000 apple-trees, all Baldwins, and 4,500 hens. Each hen produces an average of forty-four pounds of manure annually, which makes a total of about one hundred tons of manure, every pound of which is used to fertilize the orchard. As far as practicable the coops are placed between the rows of apple-trees, where they are shaded in the summer and protected from storms in winter. The orchard is conducted along usual lines. The only serious pest is the codling-moth, which is kept under control by spraying usually once in the early spring with a high-pressure sprayer that forces the solution well into the calyx. Only occasionally is a second spraying made. The percentage of perfect apples varies from ninety-five to ninety-seven per cent. They are all sold on the Liverpool market through one commission firm which has given satisfactory service for the last twenty years.

Getting Profits in the "Off" Years

The apple crop of last year was 4,500 barrels, which netted \$2.25 a barrel. In 1910, when apples were scarce all over the country, the net profits from the orchard were \$13,000. The apples are all sold in barrels made on the farm by the regular help. So much for the orchard, which is in no wise unusual, though excellently adapted as a companion crop to the poultry business, which is conducted in a particularly interesting manner.

As stated before, no chicks are raised. Pullets are bought in October or November of each year from dealers in New England, chiefly northern Vermont. The pullets are from four to five months old and are purchased by the pound at market prices, which range from sixteen to twenty cents a pound. They include all breeds and all mixtures of breeds. The transportation charges average about five cents per bird, so that the pullets cost about sixty-five cents apiece when they arrive at the farm. They are at once put into the

Sterile Eggs and Perfect Apples

Thirty-Seven Years of Farming 700 Stony Acres

By D. S. Burch

Because of the principles of successful management carried out on this farm, this great utility poultry-plant should have a lesson for every poultryman, big or little, who may be frittering away his time trying to adopt everything new he sees or hears of, and imitating men and methods that may or may not be worthy of imitation. To all the story of this plant will be interesting.

THE story about to be told is the first authorized account of the largest poultry-farm in New

A-shaped coops. Each coop is eight feet square at the bottom, and eight feet high. The farm has 650 of these coops, and twelve birds are kept in a coop, making a total housing capacity for 7,800 birds.

Years ago the hens were given the run of a small yard, but losses through skunks and prowlers has led to the adoption of the policy of constant confinement in the coops, and the hens have done equally well when confined. There have been no diseases among the fowls, and all deaths have been of a sudden nature. The dead hens that are occasionally found in the coops are immediately buried.

Diseases are Effectively Controlled

Mites are effectively controlled by putting a thick coating of tar on one side of the roosts and also around each end. The roosts are of two-by-two lumber. When the tar treatment was first used it was spread on top of the roosts, but when several colonies of birds were found to need assistance in getting down from the roosts the next morning, another method of tarring was sought and found.

Male birds are not knowingly kept on the farm. At the age when the pullets are bought the sex of the birds is difficult to definitely determine, and cockerels are sometimes accepted as pullets, but they are disposed of as soon as detected. Thus the visitor to this large-poultry-farm is surprised at the absence of roosters' crows. As the eggs are all sterile, they are especially valuable for the select trade in hot weather.

The eggs are shipped every day to one commission merchant who has handled the eggs for twenty years. The usual cases holding thirty dozen eggs are used. The eggs are not graded for color, size or in any way, and dirty eggs are washed in warm water. As all of the eggs are of unquestioned freshness and are sold for direct consumption, the washing does not reduce their value.

A trial was given the grading of eggs and packing in cartons holding a dozen, but was discontinued as less profitable under the conditions of this farm.

The hens are not trap-nested, nor are records kept of the performances of the different colonies. Hens that show an inclination to set are every Monday and Wednesday night put into a small broody coop in front of each colony house and are put back again into the colony coops the following Monday night. Note that a definite time is established for doing this work, and an equally precise system exists all through the management of the farm.

One man is employed for every thousand hens, and with the methods in vogue the men have considerable time left to devote to the orchard work. The coops are cleaned twice a year, in the late spring and early winter. Sawmill sawdust, which is plentiful in New Hampshire, is spread about two inches deep on the floor, and the manure works into it perfectly. The floors are always dry, and the coops have no odor of manure.

One fact contributing to the dryness of the coops is the manner in which the drinking-water is given.

In the front and back of each coop are two holes, each two inches wide and three inches high. A cast-iron drinking-vessel eight inches square and four inches deep is placed on a bracket just level with the holes. In summer the drinking-vessels are placed at the back holes, which are always at the north side of the coops and therefore cool, while in winter they are placed at the front, or sunny side. To lighten the task of watering the birds, which usually takes one man half a day, an eave-trough emptying into the drinking-vessel is provided for each coop. In freezing weather, when snow is available, snow is given the birds instead of water. They relish the snow equally well, eating it as such, and it has the advantage of being more easily supplied and not freezing.

The fronts of the coops are open the year around. As the roosts are in the back of the coops and halfway to the top of the A-shaped roofs, the birds are never in the extremely cold air at night. Their combs seldom are frosted, though eggs must be gathered twice a day.

The hens are sold alive every fall f. o. b. the local railway station, two miles from the farm. This sales method prevents shrinkage or dispute concerning weights. They are not given a special fattening ration, since their laying ration makes them amply heavy. As they are always well meat and never over eighteen months old from the egg, they bring excellent prices, as the birds of this farm have developed a reputation as fancy roasters.

They are fed practically the same ration the year around and yield an average of 115 to 120 eggs a year. While this is by no means a high individual record, it is creditable for several thousand pullets of plebeian pedigree. "My idea," said Mr. Vatcher in discussing egg produc-

tion, "is to make them lay themselves out the first year, and then sell them. Besides, the mortality would be large the second year under the methods we use."

Their ration consists of dry mash early in the morning, and whole corn late in the afternoon. A wet mash was formerly used, but, as it froze in winter and molded in summer, it was discarded in favor of dry



Another view of the coops, showing how completely the colonies are isolated. This has doubtless been responsible for the remarkably good health of the fowls.

mash. Mr. Vatcher pointed to a discarded steam cooker ten feet long and costing \$250 as an example of costly experience in the wet-mash line.

Here is his formula for the dry mash:

- 4 bags of commercial mixed feed (chiefly bran and middlings).
- 3 bags of corn-meal.
- 3 bags of beef-scrap.
- 1 to 2 bags of gluten.
- 1 bag of stock-food (corn and oats chiefly).
- 1 bag of prepared poultry-feed.
- 1 bag animal-meal.
- 1 bag of chopped alfalfa or clover hay.

This makes 1,500 pounds of feed, to which is added a five-pound bag of salt.

In mixing the feed the first ingredient is spread evenly on the mixing-floor, then the next ingredient is added just like a layer to a cake, and so on to the top. Then the entire pile is worked through a coarse screen four times with shovels. Half of this, or 750 pounds, is the morning ration for the 4,500 hens. The afternoon ration consists of 200 pounds of whole shelled corn. All of the feed is bought in the largest quantities practicable, and the dry mash mixed costs \$1.65 per hundred pounds.

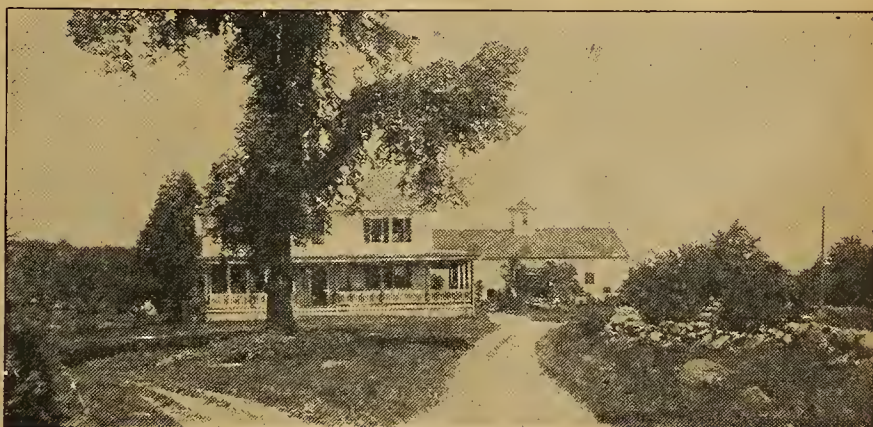
What to Feed and What It Costs

In addition to these feeds, they have before them at all times crushed oyster-shell, grit, charcoal and dried bone. Each coop contains a feeding-box for the substances last mentioned, a feeding-box for the dry mash, a dust-box and two nest-boxes. Sawdust is used in the nest-boxes. The feeding-boxes used are the result of long experience with many kinds and are simply wooden boxes ten inches square and six inches deep, covered with three-inch-mesh heavy poultry-wire. The hens can neither bolt their feed nor waste it. If all the dry mash is not eaten the next feeding is reduced.

The coops themselves are made of wood, unpainted, and roofed with various materials. Corrugated galvanized iron has been found best, although some shingled coops twenty years old are still in good condition. The present cost of building a coop is about twenty dollars.

Mr. Vatcher acknowledges that in many respects the poultry establishment is not strictly modern in methods and equipment, nor does it conform to requirements which many poultrymen consider essential.

Nevertheless the plant described is operated at a good profit for a number of reasons: First, the investment is relatively low; all the equipment is in use the year around. Second, the labor expense is small, and the business end of the plant is simplified by the absence of details, but everything that is done is done thoroughly and well. The system is perfect and the main business is not made to suffer because of numberless frills and details as is so often the case.



The approach to the farm is attractive. The barn in the background is used for storing feed and packing eggs. The few horses kept are used almost entirely for hauling crops to market.

The Farm Headwork Shop

In Looking After the Fall Repairs, Use Can Well be Made of the Ideas in This Shop

For the Tool or Feed Box



TAKE two old horseshoes, and nail them securely, one at each end of a box, as shown in illustration. This is very handy to keep tools, bolts and wrenches in, as it can be hung over a partition out of the way, and easily taken down to find what you want.

The same device is very handy to put on the back of your hay-rack to feed your team out of during shock thrashing, as it can be set off when not in use. EDWIN PORTER.

Two Styles of Hitching-Post



BY SIMPLY nailing an old horseshoe to a hitching-post, either on the top or side, you have an excellent place to tie. It is a quick hitch, and the rope cannot slip down the post. You can also nail one to a corner of the barn, allowing the curved part to extend several inches, and you have a good place to tie your team, or the bull.

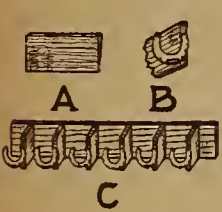
W. C. MINGEE.

Widen the Farm Gateway



VERY often it is handy to have certain gateways widened in order to let a binder, corn-shredder or thrashing outfit through. This is easily done by the device shown and eliminates the use of a blind post or the removal of a central post every time the widened gateway is to be used. The device explains itself. It may be put together with nails, but small bolts are better. Horseshoes hold the center rigid and provide hangers on which to rest the gates. It is set up in the center of the wide gateway and supports a gate on each side. Slipping of the post is prevented by the spikes driven through the bottom. Set it aside when both gates are to be opened. GEO. W. BROWN.

A Neat Rack from Horseshoes



THE most effective use I have found for old horseshoes is in making a rack to hang sacks and straps upon in either the tool-shed or barn. For this take a board one by four inches and the desired length. Then take another of about the same size, and cut in strips eight inches long, as shown in A. Nail horseshoes on the end, as in B.

Now start at the left-hand side of the first board, and nail on one of your eight-inch pieces. Then nail to the right-hand side of this another and then another, and so on the whole way through. C shows the

rack complete. When finished nail up with spikes where it is to be used. Now you have a place to hang sacks, strings, ropes, harness and many other things that make a barn look trashy, and the mice will not be able to make nests in them. If you want a rack that hangs close to the wall nail the eight-inch pieces to the long board flat, instead of endwise. EDWARD CONRAD.

Clamp for Sewing-Stand



MY BEST use for horseshoes is on a sewing-stand or vise to hold harness or other articles while repairing. It may also be used to hold hand-saws while sharpening by placing an extra board on each side of the saw to hold it and to prevent it from bending.

Take two very tough boards thirty inches long and six inches wide. Nail a piece of two-by-six, six inches long, between the bottom end of this. First bevel down the upper edge of each side of the two-by-six enough so the upper ends of the boards will come together.

When you wish to repair harness or any other article place it between the upper ends of the boards, and push your horseshoe down over the boards till they bend considerably. Set the lower end on the floor, and steady it with your knees. F. E. HOWE.

Make Old Buggy Run a While



TO PROLONG the usefulness of old buggy-wheels, fasten the loose spokes to the felines in this way: Take a piece of sheet iron, and cut out two pieces in the shape shown in left-hand side of sketch. Bore holes in the three ends. Then get some three-sixteenths-inch rivets, or make rivets by cutting up spikes to the proper length. Now bore holes in the felly

WE CAN'T publish all the good ideas about using old horseshoes that we have received, even though we want to. Our readers showed great ingenuity in the responses which came when we requested horseshoe ideas. One visitor to Farm and Fireside who has many a time made use of discarded horseshoes on his own farm said, when looking at the ideas we had laid out to print, "I never thought so much of the old horseshoe as I do now. I'll use it more." In this page of Headwork Shop we are glad to talk mostly about horseshoes.

of the wheel so that the rivets will go through, and match the holes in the sheet-iron plates. Put the rivets in place, and fasten securely. ROY J. STEARN.

A Hitching-Ring



BEND the points of a small horseshoe at right angles, and screw to a post or the side of a barn, as shown in the illustration. This makes an excellent hitching-ring that is easy to tie to and will hold. H. A. SMITH.

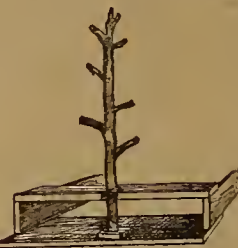
Hitch for Backward Pull



THE best use we have found on the farm for discarded horseshoes is to attach them by wire nails to the tail end of our wagon coupling-pole, using it in the form of a clevis to hitch to in drawing our wagon backward out of tight places, barn or shed floors.

We also use one of them upon the rear bench of our feed-boats, as shown in the sketch, for drawing the boats backward off the barn floors after unloading. This attachment saves us much inconvenience and heavy lugging in winter in getting out of tight places. We also attach horseshoes to the outer end of our boat-benches to keep the standard holes from splitting out when logging or boating with side-boards. GEORGE W. BROWN.

Good-Luck Hay-Rack Ladder



A LADDER for the hay-rack can be very quickly made from a short pole and a horseshoe, as illustrated. The horseshoe needs to be heated enough so that the points may be driven close enough together to encircle the pole. Nails driven through the holes in the horseshoe secure it tightly to the front crosspiece, and the lower end is blocked in by cleats. J. F. WHITE.

To Use a File Correctly

MR. A. CAMMACK of the Colorado Agricultural College gives the following rules for doing the best and the most work with a file and for lengthening its life.

A new file should never be used on very hard material such as the scale of castings or forgings or hard steel, nor should it be used on soft, tough metals or on thin edges where it bites too freely.

It should be kept clean by brushing, and should never be placed where it will rust. Rust will quickly ruin any file.

A good handle for the file is necessary for good work.

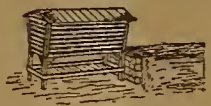
The pressure is applied to the file on the forward stroke and removed on the backward stroke, but it is not necessary to lift the file from the work.

Sufficient pressure should be applied to cause the file to "bite" freely, as this is easier on the cutting edge than merely scraping over the surface.

A double-cut file will bite more freely and leave a more broken surface than a single-cut file of the same size.

There are twenty different standard forms in which files are manufactured, and a careful selection of the kind most adapted to the work will benefit the quality of the work, prolong the life of the file and result in greater satisfaction to the workman.

Corn-Crib and Feed-Rack



A NEW YORK cattle-feeder devised the combination corn-crib and feed-rack here sketched to feed his cattle by the gravity system. The corn is unloaded into the crib from the wagon and is fed into the trough below through a door in the bottom of the crib just to the side of the entrance at the right-hand side. The crib and feeding-box are supported by heavy posts well braced. R. W. GREEN.

Horseshoe for Gate-Hook



A GOOD hook for a gate can easily be made from an old horseshoe, a piece of trace-chain and a strong staple. Slip one side of the horseshoe in the end link of the chain, nail the other end to the post where the gate opens. To latch the gate, slip the shoe over one of the boards of the fence. It will last as long as the gate and is a good, handy latch. I use this hook on all my gates. MR. M. L. WHITE.

Stake and Standard Holders



FOR stake and standard holders on a plank sled use old horseshoes, and you have good ones without a cent of cost. Just nail them on top of the planks, two or more to each side, as illustrated. Drive a punch through the nail-holes of another shoe to make bolt holes, and bolt it fast to front of sled to make a good hitch. S. E. RHINE.

Support for Tongue or Thills

AN EXCELLENT use for an old horseshoe is a support for a buggy tongue or thills while in the shed. Nail the shoe to an overhead or side timber, as shown in the sketches, and run the end of the tongue or one of the thills through it. This will prevent them from becoming scratched and dirty, as well as keeping them out of the way and giving more room in the shed. GEORGE M. BENNET.

Has the San José Scale Been Conquered?

By H. A. SURFACE, Economic Zoölogist of Pennsylvania

THE San José scale has been eradicated in what was previously the worst infested district in Pennsylvania. The newspaper articles are not exaggerated. In fact, it is difficult to make it strong enough to express the facts of the case.

A parasite has done the work. Nurseries that were so badly infested a year or two ago that they could not obtain certificates are now apparently absolutely free from the living San José scale, as the pest cannot be found in them by my best inspectors who have searched on hands and knees for days inspecting the little trees with microscopes. Older fruit-trees that have never been sprayed have the remains of San José scale upon the bark in quantity, but they are perforated, showing the marks of the parasite, and there is absolutely no scale on the new growth.

We have been able to breed this parasite in our cages, and have successfully disseminated it. To what extent the practical dissemination of the parasite can be carried remains to be proven, but that it is successful is shown beyond doubt. I have on my own premises trees that were on purpose left untreated for observation, and which have the wood of last year badly marked with the scale, while the wood of this year is absolutely free from any pest.

This condition has greatly aided the fakirs and dealers in questionable substances, as there is a class of such persons springing up in this State who insist on treating trees by what they call "vaccination," which consists in putting a material

of some kind into a hole in a tree. They are now pointing with great exultation to the fact that the scale is dead on the trees, and, therefore, their treatment the cause. Upon a careful examination it is found that the parasite is the cause, and in most cases the treatment has proven injurious to the trees by either direct injury, or by admitting disease germs, or making favorable places for the woolly aphis or other pests to work. Also, the dealers in questionable insecticides are claiming good results suddenly appearing for their sprays, although, fortunately, even before this parasite had made its appearance almost all orchardists had universally agreed that the boiled lime-sulphur solution was the one efficient and satisfactory means for controlling the scale.

A Parasite That Helps the World

The sudden wide development of the parasite, aided in its dissemination partially by the efforts of this office, has here changed the face of things horticulturally. For example, one gentleman to-day told me that he was just preparing to erect an extensive plant for making and applying boiled lime-sulphur solution for the scale in his apple-orchard, and when I showed him that his trees were free from scale, because he was in a region of parasites, where these had been liberated and are now decidedly effective, he could scarcely believe it, but is now rejoicing in the fact that his trees are unexpectedly free from this pest.

The matter is, indeed, of world-wide importance because there are entire counties

in the southeastern part of this State where the infestation by the San José scale was once at its worst, but where now scarcely a live specimen of the scale can be found, although the old perforated shells remain.

The parasite is a hymenopterous insect that is so very small that it requires good eyesight to see it. The only way that we could at first obtain it was by keeping in cages some branches containing the San José scale, through the shells of which the minute holes of some parasite were visible. As others emerged they were captured. I am satisfied that it is the smallest that I ever saw, but it is not always the size that counts. Strength comes from numbers.

In disseminating it we are sending infested parasitized branches into infested and non-parasitized orchards. In determining its presence in an orchard we are guided chiefly by the presence or absence of perforations through the scales, as these are much more plainly seen than are the minute amber-colored insects.

The importance of this discovery and work are recognized by our leading fruit-growers, all of whom rejoiced in it, excepting those who are engaged in obtaining their money chiefly from the sale of insecticides. Its value is already recognized in several other States from which there have come appeals for specimens of the parasites, which are to be sent out as soon as the demands from within our own State are met. There is no limit to the abundance of these parasites throughout the southeastern quarter of Pennsylvania.

The San José scale has for ten years or more been regarded as the darkest cloud that has ever overshadowed American horticulture. It now appears that through this microscopical but very remarkable and efficient parasite the light is breaking. It does not, however, necessarily mean any change in the horticultural methods or operations, as our progressive fruit-growers have at last learned through years of earnest demonstration on our part that their orchards should be sprayed at least once when dormant with the lime-sulphur solution, and there are many of us who own large orchards who will do this whether the San José scale is present or not.

The Back-Yard Orchardist is Favored

I myself own and manage by far the largest orchard in Pennsylvania, and I can assure you that in my orchards the trees will have the regular dormant spraying with the home-boiled lime-sulphur solution, whether among the insects present are scales or parasites, as this material destroys other injurious insects, as well as the germs of several kinds of plant-diseases and undoubtedly acts as a tonic upon the trees. I think that it does mean that the person who is satisfied to grow a few wormy apples or other fruits in his own yard can do so without being forced to have the trees sprayed. Before the advent of the parasite it was evident that the home orchard of the non-professional horticulturist was doomed either to destruction or to be an object of annual spraying.

You can now own a complete, modern, disc Grafonola with an outfit of 12 double-disc records (24 pieces) for **\$59** cash—or at the same cash price on \$5 monthly payments if you like—no interest or extras. All delivered by our nearest dealer and subject to approval.



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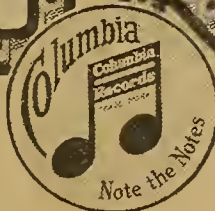
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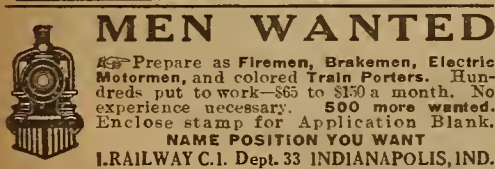
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A good plan for small patches is to cut the thistles when in bloom, and then salt

I have often heard it said that such or such a farmstead was hopeless in its inconvenience and awkwardness of arrangement. This is rarely, if ever, true. Necessity is proverbially the mother of invention, and a careful and thoughtful survey of the situation will almost always point the way to better and more economical conditions.

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Live Stock and Dairy

Sheep Command High Prices

By John Pickering Ross

A GOOD object lesson in the paying possibilities of a pure-bred flock of sheep is to be found in the records of the recent dispersal sale of the Lincoln long-wool flock of the late Henry Dudding, whose name is as familiar among sheepmen over here as among those of his own country. Nineteen hundred and sixty-five head of sheep and lambs realized \$76,000. The highest price



A Lincoln ewe of quality

paid was \$3,000, for a ram to go to the Argentine; and the next, \$1,300, for one for New Zealand. Our sheepmen were not largely represented, probably because many of our Lincoln flocks already contain splendid individuals of the Raby blood.

A Deceptive Disease

MANY people think they can tell a tubercular cow by looking at her; and these people never can be convinced that a cow which looks well, eats well and gives a good mess of milk is diseased. But, as a matter of fact, these appearances cannot be relied upon in the least. At the Ontario station a cow which seemed to be healthy and gave milk for the last six months of her life at the rate of nearly thirty pounds a day, or ten thousand pounds a year, was found, on post-mortem examination, to be tubercular, as Professor Wade reports, "in practically every important organ in her body."

Most buyers would have been glad to give a hundred dollars for this cow; and she would have been more harmful than a car-load of rattlesnakes to a dairyman.

The Ontario station has tried out the Bang system of isolating the calves from a tubercular dairy herd and building up a new herd without killing off the old one. After three years they had a beef herd of fifty-four animals free from the disease, a clean dairy herd of thirty and a small diseased herd.

This was accomplished by a rigid use of the tuberculin test, which is regarded as absolutely necessary. All animals shown to be diseased were removed from the sound herds at once. The most careful separation of herds was maintained, and the most careful system of spraying with lime and carbolic acid. All diseased animals were closely quarantined; and the attendants who cared for the diseased cattle were not allowed to have anything to do with the sound ones.

Any farmer can see that, while the Bang system may do for an experiment station or a big dairy, it would be hard to adapt to farm conditions. The true rule for the farmer is to get rid of the tubercular cattle.

Use Poultice on Scratches

By A. S. Alexander.

DO NOT wash the legs of a horse when troubled with scratches. Poultice for a few days with hot flaxseed-meal, then apply freely twice a day a mixture of one dram of spirits of camphor, two drams of sulphur and one ounce of lard.

Don't Let Her Run

By David Buffum

A FARM AND FIRESIDE reader in Oklahoma has an eight-year-old mare that has developed the habit of running at the slightest provocation. She has never yet succeeded in getting away.

Any horse can be cured of the habit of running away. As this mare has never got away, her case ought to be exceptionally easy treatment, though horses vary so greatly in temperament that it is never possible to say in advance how much treatment will be necessary. But if the treatment is applied intelligently and the owner is patient and persevering success is sure.

The device I recommended I call the "controller." I have told about it before in the columns of this paper. But in your case I would suggest trying a foot-line first. Tie a strong rope, about the size of your finger, to her fore foot, then up through the belly-band and back into the wagon. Pull upon this and put her upon three legs the

moment she tries to run. Give this a thorough trial, and if it does not work to your satisfaction, then use the controller.

Now a word about your bit. If your mare is accustomed to a overdraw check, get yourself a four-ring bit and adjust it with the check-rein fairly, but not inordinately, tight. You can hold her easily with this bit, and its great advantage is that when driving with a gentle rein it is as easy as any bit you can use. It is severe only when it is necessary to pull hard on the reins. Be as quiet and gentle as possible when applying treatment to your mare; do not use the whip or speak to her in a loud or harsh voice. It is always easy for me to give directions for treatment in a case like yours, but you must remember that much depends upon the intelligence and judgment with which the treatment is applied.

Another Dog-Danger to Sheep

DOGS have tapeworms. The eggs of these are deposited by the dogs about the fields, and from the eggs dropped by the dogs the flocks become infested with the sheep-measle, which spoils the meat of the sheep by locating in the muscles—the lean mutton.

This is so important a matter that the United States Department of Agriculture has issued a circular referring to it. Probably as many as five per cent. of our western sheep are infested, and when the case is a bad one the carcass is condemned at the slaughter-houses by the inspectors.

The dogs get the tapeworms by eating raw mutton. If all raw mutton could be kept away from dogs the disease would be extirpated. It is suggested that the dogs of the country be treated for tapeworm, but the method of treatment is not given. This plan is not practicable, anyhow, while so many people who care nothing about sheep possess dogs.

The keeping of dogs is just naturally antagonistic to the sheep industry, any way the problem is viewed. Dogs should all be listed, and the acquisition of a new dog by any person should be made so expensive as to cut the numbers down to the minimum. Legislators should not forget this. And neither should farmers.

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Post Toasties

and Cream

There's a delicious smack in these crisp, appetizing bits of toasted corn that brings brightness and good cheer to many and many a breakfast table.

Toasties are untouched by hand in making; and come in tightly sealed packages—clean and sweet—ready to eat with cream and sugar.

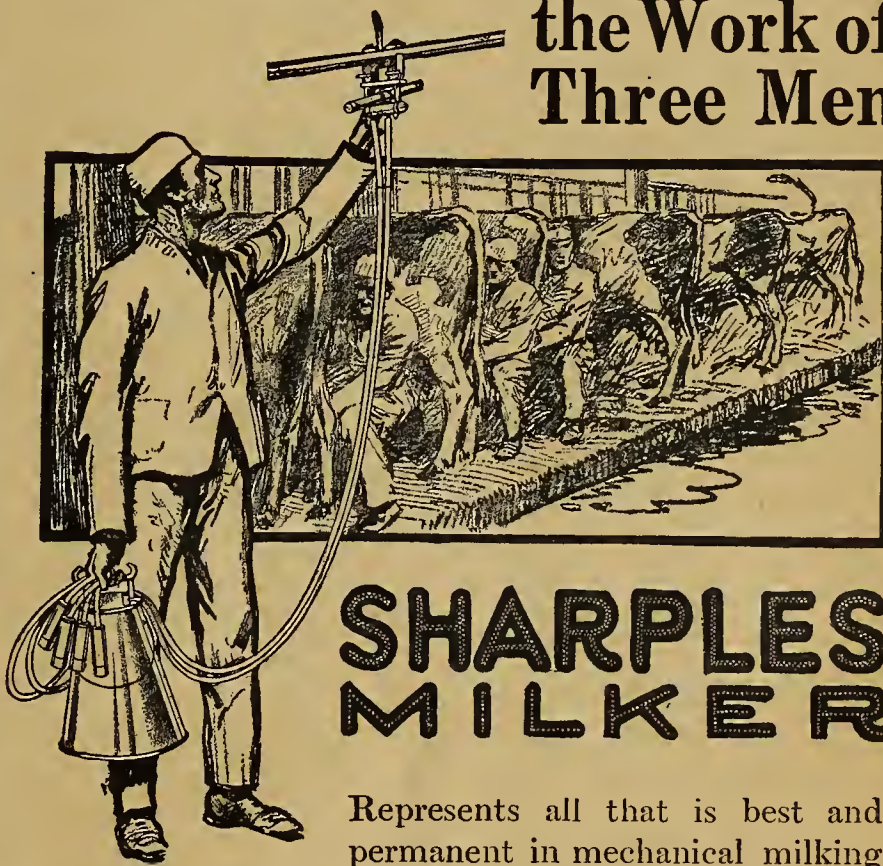
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It would mean that with the Milker one man could do the work of three. It would eliminate the tedious, disagreeable, slow hand milking—known as dairying drudgery. It would mean a better and more contented class of employees. It would mean that you would be able to accomplish the conditions that would save time, trouble, labor and money.

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Cows take to the Sharples Milker and stand quietly and more contentedly than when milked by hand, for it always milks a cow in exactly the same way every time. It is regular and gentle. It fosters milk production by keeping the cows in better condition. The Sharples has the "teat cup with the upward squeeze."

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Garden and Orchard

Knife Prunes Closely

By C. M. Weed

I HAVE found one form of the leather-knives often sold as kitchen knives a very useful substitute for the expensive pruning-knives. I refer to the form with a hooked tip, sometimes called the hawk's-bill knife. These are on sale at the hardware-stores, commonly at ten cents each. They are easily sharpened and are especially useful in removing small water-sprouts or suckers on the trunks and larger limbs of apple-trees. The knife enables one to trim off closer than with pruning-shears, and this is an advantage, because a close, clean cut heals over more smoothly and leaves less chance for other twigs to start. Select a knife with a blade about two inches long.

Cherish Your Apple-Trees

By Clarence M. Weed

I WAS much interested in the recent editorial experience reported in FARM AND FIRESIDE concerning the over-production of apples. The experience may indicate conditions in the great West, but no one in eastern regions should allow the fear of over-production to lead him to neglect his apple-trees until after a careful study of the situation. The nearness to centers of population is a very important factor in the problem.

Any consideration of the production of apples in the future should take into account the spread of two insect pests which have already revolutionized orcharding as far as they have become distributed. I mean the brown-tail and the gipsy moths. Starting in eastern Massachusetts, these pests have become well scattered over New England, and every year are extending toward the North, West and South. The brown-tail goes the faster and is especially disastrous to apple-trees, which form its favorite food-supply. During recent trips in Massachusetts and New Hampshire, extending from near the point of origin of this moth to about its northern limit, I have seen thousands of dead and dying apple-trees scourged by the brown-tail caterpillars.

Two Enemies to Fight

In the regions where the pests have been present longest they are not now so destructive as they are where they have come more recently. In the former places their enemies seem to have established a balance, but as they spread outward they are virulent for enough years to destroy every apple-tree that is not cherished by careful attention. In northern New England there are probably millions of native wild apples scattered in woods and along highways. These are being ruthlessly destroyed, as well as every neglected tree in field or orchard.

The gipsy-moth caterpillars are rapidly following in the wake of the brown-tails to make their destructive work more certain. I recently saw them within a mile or two of my farm in northern New Hampshire, which is probably the place farthest away from the origin of this pest. How they came there is a mystery, but perhaps a caterpillar crawled off a passing automobile.

The result in reducing apple production is certain. Millions of people who have heretofore depended upon the supply from the local trees are to be deprived of these and will probably have to buy their apples from those who have cherished their trees through all dangers.

Already the wave of enthusiasm that attended the planting of orchards in New

England a few years ago is passing and the reaction setting in. Borers, deer-mice, scale insects and caterpillars have all done their part to discourage thousands of planters and lead practically to the abandonment of many promising orchards. Changes of ownership have caused others to be neglected, and it is becoming more and more evident that there will be no over-production of apples in New England for many years to come.

So if you have any apple-trees in the eastern region of the United States, where the population is large and markets near at hand, cherish them and a fair reward is certain.

The Matted Row Must Go

By W. D. Boynton

IN THE West where all fruit-growing has been reduced to a working science the matted-row system of growing strawberries is seldom tolerated. Good cultural processes cannot be followed under this old slipshod plan. Thorough cultivation cannot be carried on. The wide matted strip can only be hand weeded, and owing to the lack of soil stirring in this row or bed the moisture-conserving dust mulch is always absent. Even with a fair amount of thinning out (which is seldom given by those who follow this method) no plant has space or culture enough to develop well.

Hill culture, which means the keeping down of all runner growths and centralizing the strength of the soil and the moisture in the original hills set, conforms strictly to good cultural theory and practice. Naturally it produces the highest results. In good, rich land the roots of a single hill will form a great mass of roots twelve to fifteen inches in every direction. From this one heavily rooted plant from three to six strong sturdy fruit crowns will come out, with a great mass of foliage and long strong fruit stems. The sun and air get an even chance at all the hills, and on nearly all sides of each hill, so that the fruit specimens are much larger, more evenly and highly colored and firmer for the long-distance shipment. The largest known yields are from the hill plantations.

If planted in the check-row—as most growers do on the west coast, thirty inches apart each way—the shallow-running cultivator can be operated both ways, tolerably close to the hills, so that the necessary earth mulch is constantly maintained. If planted in the double row, alternating with the wide space for pickers, as many have it, the cultivation cannot be quite so thorough, but there are compensating advantages.

Under both the check-row and the double-row systems strict hill culture is observed. All runners are kept down, and the whole strength of the land-centered in the original hills. The labor of keeping down the runners is considerable—so also is the hand weeding in the old matted row. Soft, unevenly colored berries are the inevitable result of the crowded plants of the old matted row; while large size, even color and firm texture are the results of the hill system.

The hill plantations can be fertilized and cultivated so thoroughly that the plantations can be carried double the number of years from one planting that the matted row can—another compensating advantage that would fully even the labor question.

Fighting Jack Frost

Frost-fighting has been carried on at the Nevada Experiment Station under great disadvantages, owing to the situation of the orchard. But last spring the fight against frost was successful for several days during which the temperature went as low as 19° above zero.

Then it got colder, and the figers gave up. But the experiment is valuable as showing what might have been done if the conditions had been only normally severe.

The Bay-Breasted Warbler

By H. W. Weisgerber

THERE is not much to bird study until one begins to get acquainted with the warblers and tried to master that large and difficult family. Identifying most of the birds in the bush is an easy matter until a student finds the warblers. I doubt if any professional, no matter how well versed in bird ways, can accurately name, without the aid of a gun, every warbler that he sees. The trouble is that, like so many other birds, there are really three for each specie; that is, the adult male, the adult female and the immature bird, whether male or female, and each one is marked differently. The female of one specie may resemble the male of another specie.

It is difficult to recognize many of the warblers when they return from the North in the fall, after undergoing a "molt" and coming out in new feathers. But during the northward movement in the spring they are more easily identified. And at this time the little bay-breasted is very conspicuous, even in the tall treetops. His handsome chestnut throat, breast and flanks, with whitish under parts, are very prominent, enough so that he can readily be distinguished from other warblers.

What a valuable host these little birds are! Without their services the trees would soon be denuded by the army of worms. The warbler gathers the worms soon after they are hatched, and it requires many to make a meal for the bird.



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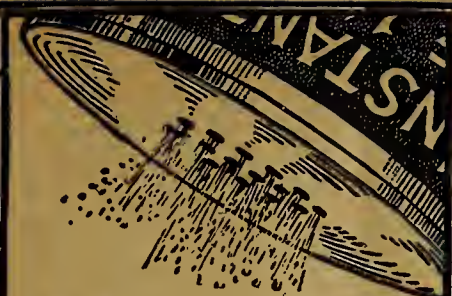
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THESE days, when machine farming of big areas appeals more and more to nearly every young farmer about to begin for himself, there is special interest in what is being accomplished on little farms.

One coming under this category is located in Saluda County, South Carolina, owned and operated by R. B. Watson and sons. The farm contains, all told, only fifteen acres. About one acre is occupied with the house, barn, carriage-house, packing-house and yard; also, one and one-half acres unfit for tillage was about to be drained when this report was secured.

Mr. Watson, Sr., has passed his seventy-sixth milestone, and he and his life partner have made their matrimonial journey together for fifty-two years, living where his forebears have lived for five generations. His interest and delight in making his little home place productive and profitable has not lessened a whit with the passing of the years. Some idea of Mr. Watson's physical fitness for farming might be understood from the fact that he had just returned from a horseback ride of forty-five miles from a religious convention at the time this account was placed on paper for FARM AND FIRESIDE readers.

His Motto: "Intensify and Diversify"

The soil of the little farm is sandy loam overlaying clay, and the greater part is rich in plant-food and vegetable matter, kept so by systematic fertilizing, for the most part with stable manure, and good culture, through a half-century of steady, intensive production. The motto "Intensify and Diversify" was long since adopted on this farm. Cows, hogs and poultry are kept in such numbers as prove most profitable, combined with fruit, truck and anything that will turn a profitable penny.

Two good cows, Berkshire swine and pure-bred poultry were kept during the year comprising this report, and the sale of weanling pigs, eggs for market and hatching, milk and butter materially helped to swell the income. The catch and cover crops, refuse from truck crops and stubble gleanings were sufficient to materially reduce the feed-bills. Rye and barley, sown following truck and grain crops, furnished green feed from October to May for cows, hogs and poultry. Then grass, sorghum and green corn provided soiling feed until fall. In addition, the poultry had access to stubble-fields, sorghum and sunflower seeds, chufas, etc.

From the stock kept fifty loads of rich manure was saved under cover, which, with the aid of cover crops turned down, made unnecessary the heavy expense for commercial fertilizer.

In making up the account of the operations of his little farm, Mr. Watson made no record of the large number of chickens and eggs and the generous quantity of butter consumed for home use in his large family. The book account of credits and debits for the year follows:

SALES	
Peach trees (600 trees)	\$2,455.25
Poultry and eggs	567.50
Berkshire pigs	187.50
1,075 lbs. pork	80.62
150 bu. corn	112.50
106 bu. oats	74.20
Rye	9.00
100,000 asparagus-roots	200.00
Milk and butter	109.25
Beans	14.25
Irish potatoes	5.05
60 bu. sweet potatoes	30.00
Strawberries	7.25
Radishes	10.00
1½ tons pea-vine hay	22.50
Sorghum-hay	23.00
Premiums won at fairs on corn, poultry and hogs	104.65
Profit on cows bought and sold	54.00
1 bale long-staple cotton (not sold) estimated at	50.00
Total sales	\$4,116.52
EXPENSES	
Labor	\$286.50
Feed for stock	239.25
Fertilizers	60.50
Crates	252.00
Cost of exhibiting stock at fairs	30.00
Total expenses	\$868.25
Net income	\$3,248.27

This shows a net average income for the year of over \$230 per acre.



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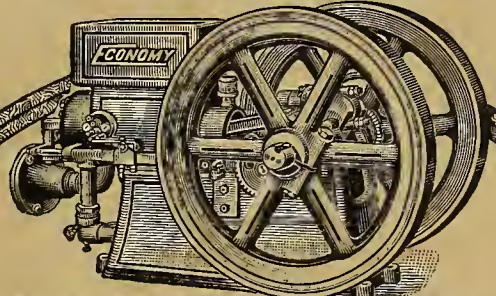
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"I am now able to eat fruit, meat and nearly all vegetables for dinner, but fondly continue Grape-Nuts for breakfast and supper.

"At the time of beginning Grape-Nuts I could scarcely speak a sentence without changing words around or 'talking crooked' in some way, but I have become so strengthened that I no longer have that trouble." Name given by Postum Co., Battle Creek, Mich.

"There's a reason," and it is explained in the little book, "The Road to Wellville," in pkgs.

Ever read the above letter? A new one appears from time to time. They are genuine, true, and full of human interest.

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Crops and Soils

Important to Potato-Growers

PRIOR to 1912 a great many potatoes were imported from abroad. In 1911 the number of bushels was fifteen millions. The quarantine against potato-wart, powdery scab and pink tuber-rot will for some time shut out all the crop from Germany, Austria-Hungary, Newfoundland and the French Islands in the St. Lawrence: St. Pierre and Miquelon.

This means that we shall have to produce all the potatoes we consume in the United States, except those from the Bermudas and Canada. This condition will in all probability last for some years, and may be expected to affect the price of the crop.

Crop Production Limited

By Harry N. Holmes

IT IS a matter for American shame that our wheat production averages only thirteen bushels per acre, less than half that of England and other European countries. Truly we have occasion to study well the use of clover and other legumes in adding nitrogen of the air to the soil. Our population is increasing at a rate that will soon demand intensive farming. At present our richest lands cannot support an agricultural population of more than thirty to the square mile. This is a poor showing in comparison with the two hundred or more living on a square mile of Belgium land, or the two or three thousand making a living from a square mile of the richest land in China.

Director Hall, of the Rothamstead Experiment Station, fills us with alarm by the statement that no land can continuously and economically produce more than thirty-five bushels of wheat per acre. He has proved that after the soil has been fertilized to that limit any excess manure is largely wasted. Bacteria that decompose manures, releasing nitrogen into the air, begin to work whenever the soil contains too much humus or organic material. Hall believes there is good reason to expect that we will soon be able to destroy these wasteful bacteria by various sterilizing means. Even now some greenhouse men heat soil to the temperature of boiling water, killing these bacteria. They can then afford to use excessively rich soil without the usual nitrogen loss into the air.

If clover were to be grown on a sterilized soil the field would have to be inoculated with the nitrifying bacteria which grow on clover-roots, but this could be done quite easily. The only bacteria present after that would be the beneficial ones, those that store up nitrogen from the air.

Soil sterilization by means of various chemicals, such as formaldehyde, is now being given a thorough trial, and much may be expected from the results.

Water and Crops

HOW much water shall we use? This is always a problem for the irrigator. In Nevada it has been found that the best results with wheat were obtained by using nearly one and one-half feet of water, in five instalments—three irrigations before heading, and two after. But a foot of water, in three applications, brought a yield of forty-two and one-half bushels, or within three bushels of the best. Oats did best by using a foot of water, in three irrigations—one before heading, and two after. Alfalfa on which over five feet of water was lavished yielded over seven and one-half tons to the acre, and about six and one-half tons by using about three feet. The best yield of potatoes was obtained by the use of nearly four and one-half feet of water. But the climate of Nevada is very dry.

"Fooling" with Alfalfa

TWENTY years ago the owner of a West Virginia farm began "fooling" with alfalfa. He scattered it about his farm, but never made a success of it. But the scattering plants slowly inoculated the farm, and now alfalfa can be successfully sown without inoculation anywhere on the farm. There is a lesson in this for many of us. If we will pursue the plan of sowing a quart or so of alfalfa-seed to the acre with all our clover or grass seeding we shall soon find that the farm has become "friendly" to alfalfa.

Fertility That's Lost

By Chesla Sherlock

FERTILITY is not only lost by being taken out by the crops. It is lost in several other ways. One is by drainage. If the soil is given to surface washing, much of the fertility will be lost, leaving only the undesirable elements behind. The loss of fertility by drainage cannot be prevented by the farmer, for, without drainage, he could not grow his crops at all. Surface washings, however, can be prevented, to a large extent, by plowing a little deeper and

running crosswise of the slope instead of lengthwise.

Another means of losing fertility is the lack of rotation of the crops. It was found that by growing wheat on the same land continually for a period of ten years it cost a farmer a loss of two thousand pounds of nitrogen alone per acre, outside of what was taken out in the crop. The loss was divided between the too rapid decay of the humus and loss in drainage. Fifty acres grown year after year for twenty years would mean a loss of over \$30,000 worth of nitrogen alone.

Where corn is grown the loss is not nearly so great. The probable reason for this is that the corn shades the ground and prevents the too rapid decay of the humus; while, after the harvest, the wheat-stubble fields are left exposed to the hot rays of the sun. It has been found that a rotation of grass and an application of manure will overcome the loss.

Where a rotation of wheat, oats, corn and clover is practised the soil is found to be just as rich in nitrogen as when first used for the wheat. The rotation kept the soil rich in nitrogen and, in addition, gave the farmer the returns from the crops grown. He had his profits and his land was still as good as ever.

The most common method of returning the lost fertility to the soil is the application of barn-yard manure. Some of us realize the value of the manure on soils and use it in the right way, but there are still some of the "old school" that leave their manure out to be exposed to all manner of weather and the rays of the sun. When they get ready to put it back on the land it is almost worthless.

How Many Apples from a Tree?

RECORDS of exceptionally heavy production of apples from individual trees are common in every apple-growing section, but these, as a rule, furnish only the yield of one year, or two years at most.

A Dominion experiment station has completed a record of thirty-six varieties of apples extending over a score of years since the trees came into bearing. Of the varieties tested, the McIntosh showed the greatest variation of production. The highest yield was ninety-five bushels from one tree, and the lowest, twenty bushels, during the twenty-year period mentioned. Two Duchess trees produced one hundred bushels each, a third only seventeen bushels. The highest yield of the Yellow Transparent was sixty-seven bushels, and the lowest seventeen bushels.

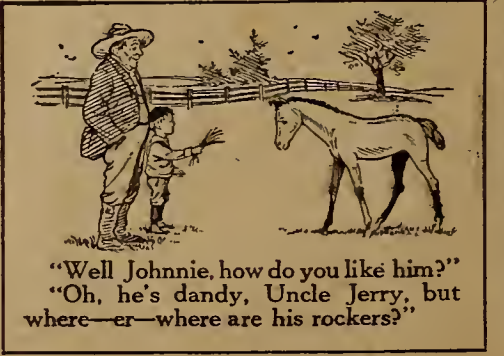
The maximum yield of an average of five bushels or less, annually, per tree seems unprofitably low to the apple-grower whose trees are large and highly productive. A well-known fruit-grower of the Empire State asserts that he has satisfactory evidence that a Hamby apple-tree in Patrick County, Virginia, has borne one hundred and thirty-two bushels of apples in one year; and that from a Blue Pearmain tree in Delaware County, Ohio, thirty barrels of apples were packed in the fall of 1857.

These yields are far and away beyond any production of which the writer has personal knowledge, but he does know of an orchard of less than two acres in area in western Pennsylvania in which a dozen or more trees frequently yielded over thirty bushels per tree; and in a period of fifteen years these trees bore two hundred bushels of apples each. These trees are Roxbury Russets, Rhode Island Greenings and Baldwins.

From one of the Baldwin trees included in this group seventeen barrels of choice apples were marketed one fall in the nineties, and over a dozen bushels of windfalls and apples dropped while picking easily brought the yield of this tree up to the fifty-bushel mark.

Surprising apple-stories? They are, but the last-named yields are vouched for by the writer, who harvested, packed and marketed the apples.

Do the crops get too much light in hot, sunny weather? Tests made in Louisiana show that potatoes, cotton, lettuce and radishes made better growth in that climate when the sunlight was cut down by from one half to a great deal more than one half. When the light was cut down to one-fifth of normal none of the plants were found to be able to grow. Corn grew better in full sunlight than when partially shaded. These experiments suggest ideas to growers of vegetables and flowers in the use of cheap cheese-cloth or muslin sun-shades for the plants. They should remember, however, that only is true which works.



GARDENING

BY T. GREINER

Keeping Sweet Potatoes

SWEET potatoes that are sound, have never been touched by the least frost and have not been bruised by rough handling will keep well if stored in a fairly dry and warm room. It is useless to try to keep potatoes not answering these conditions more than a short time. They are sure to decay or become worthless for eating. I never enjoy a sweet potato more than when they come on the table nicely baked or steamed, shortly after I have dug them from my own garden. In my present location I am unable to grow them. I could do it easily if I had a piece of warm sandy loam in fairly good condition. It's not worth while attempting to grow them in our climate here in our strong loams, mucks or other cool soils.

Celery for Winter

Very little banking up with earth will fit celery for winter storage. All that is required is to force a compact, upright growth. For an easy way in the home garden get a wide-bladed hoe, and draw the soil up from both sides to the single or double row, letting it come under the outer leaves and against the stalks, thus forcing the outer leaf-stalks up toward the heart of the plants and holding them in that upright position by drawing more soil against them. Banking the rows in this manner four or five inches high against the plants will do the business. Then you may well be ready, just before the close of the open season, to take up the plants and store them in a cool, dark, frost-free room, such as a good vegetable-cellar. Take up the plants when dry and not frozen, leaving what soil will adhere to the roots, and pack them on a damp, earth-covered floor, standing upright and crowded as closely as possible together, and pack more damp soil or muck over the roots and base of the plants. There they will fully blanch and become deliciously brittle and sweet by or before midwinter. The earlier celery that is already well blanched I also store in this manner, but in a place where most accessible, so it can be taken out and used first. The blanched celery will not keep so long as the non-blanched. Before storing away the outer, more or less decayed or defective leaves are pulled off from the roots. We should not attempt to keep this blanched portion of our celery crop far into the winter. Blanching is the first step toward decay.

The English Broad Bean

An interesting plant, half hardy like the pea, is the English broad bean, provided the season is cool enough to make it give a crop. The past summer, however, was disastrous for it. My plants could not stand the hot sun we had this year, and the leaves turned brown and died early, the blossoms failing to set, so that there was not one ripe seed in the trial patch. Some years ago I grew a number of varieties with some measure of success. This bean is used in England in the green-shelled state, as we use Lima beans. The latter are much better in quality, however, and we can easily dispense with the broad bean of Old England.

Hotbed for Next Spring

The reader who inquires about making and running a hotbed does well to give this matter so early attention. Many persons have to think long and earnestly over a matter before they can muster up courage enough to go at it. If you calculate to have a good garden next season you need the help of a hotbed, even if only of one or two ordinary sashes. Secure the latter. Sometimes you can buy a few at an auction, or from one or the other of the parties advertising them in the agricultural and especially horticultural papers. You can get them single-glazed or double-glazed. The latter are especially useful in a locality with severe winters. All you will need then is a box or some rough boards to make a box or frame of the size that the available sashes will cover. Select the most protected available spot having good drainage, with southern exposure, and here dig a pit of the required size, which is to be filled next spring (February or March) with fresh fermenting horse-manure well tramped down, at least even with the surrounding soil surface. The frame is set upon this manure, a layer of good soil is placed five or six inches deep upon the manure, inside the frame, then the sashes are put on, and when the manure has begun to heat up the soil you are ready for sowing the seeds of early plants. It is all very simple and plain. I advise you strongly, however, to look up the catalogues of leading seed-houses. Almost all of them contain full descriptions, some with illustrations, of hotbeds and hotbed-making. Study them, as also good garden books. And don't neglect to secure your equipment in good season.

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The Market Outlook

Where Sheep Win Out

By J. P. Ross

A STRIKING proof of the healthy condition of the sheep-market can be found in the fact that though over 400,000 sheep and lambs came into the Chicago stock-yards during the last two weeks of September, prices were practically undisturbed. The following figures from *The Farmers' and Drovers' Journal* are worth studying in this regard:

Total sheep received in week ending September 29th, 231,647*; previous week, 187,022; corresponding week, 1912, 177,221; corresponding week, 1911, 157,377.

*The largest on record of any one week.

With about one third larger receipts prices of sheep were fifty cents and of lambs fifteen cents higher than in 1912. Feeders were in great demand, 99,000 of the 231,647 going for that purpose; yearlings at \$5.50, lambs at from \$6 to \$6.60, and wethers at from \$4.15 to \$4.50.

The wool-market is quiet but firm.

That a very serious scarcity of beef is impending appears to be the settled opinion of all who are competent to form a judgment. The Packers' Association, naturally anxious about the supply of the raw material of their trade, have appropriated \$500,000 to maintain an educational crusade to induce the public to abstain from eating veal; and to persuade the farmers to retain and feed their calves till in eighteen months or two years they should, as "baby beef," be worth from \$75 to \$100, instead of selling them when sucklings for \$8 or \$10. Congress, the United States Government, many state legislatures and the bankers are all considering plans for helping the farmers to replenish the supply of cattle by subsidies or otherwise. Farm journals, magazines and the daily papers are more or less given to forebodings of the time when, having eaten up the horses in lieu of beef, we shall be driven to cultivate our farms by steam, electricity or gasoline. These portentous movements coupled with the strength shown in the sheep-market lead to the inference that the above-mentioned authorities are convinced that the sheepmen need no subsidizing, but that the demand for mutton is so assured, and the capital required for its production comparatively so small, that men who have hitherto held aloof from sheep culture will be induced to make it a leading feature in their business without outside help, and the more so because the American farmer is generally inclined to trust to his own brains, industry and resources. It is a matter of fact that hundreds of cattlemen who have hitherto stuck to that line have lately become patrons of the sheep-pens and are paying high prices for both breeders and feeders.

Considerable numbers of very desirable yearling and two-year-old grade ewes are appearing in the leading markets and are selling at from \$4 to \$4.75. These offer good opportunities to start or replenish a breeding flock this season. Many of them are too good to be slaughtered; and if their sacrifice is continued it may eventually prove as disastrous as the wholesale killing of calves for veal.

The Meat We Didn't Eat

UNCLE SAM has now been on the trail of bad meat, for seven years. His inspectors during this time have condemned, in round numbers, one hundred and fifty million pounds of meat, or one and one-half pounds for each consumer, counting infants. Had this bad meat been eaten the average proportion per capita would have been one ounce of bad meat every one hundred days; and even such a small quantity might have made the eater miserable for the following hundred days, if it didn't finish him entirely. Then, too, he might have got his pound and a half of bad meat all in one day. Keep the bad-meat trail hot, Uncle Sammy!

Why Apples are High

By Burton H. Albee

WITH a crop estimated at 35,000,000 barrels the country scarcely has sufficient apples to supply its requirements, and already prominent New York operators are predicting a \$5-a-barrel market. They base this forecast upon the fact that New York growers are now refusing to sell at less than that for Spies, Baldwins and Greenings, though no serious shortage has been reported through the eastern part of the country excepting in Baldwins.

A number of the leading operators in New York City, some of whom direct the handling of a number of million barrels a year, have already made propositions of \$2.50 to \$2.75 a barrel tree run at the orchard. But information from the producing sections visited by these operators was to the effect that growers refused to

accept that figure and are holding out for more. No. 1 apples in the varieties mentioned, based upon these figures, could not be sold in the New York market for less than \$5 a barrel.

According to reports, producers around Rochester, New York, the greatest apple-producing region of the East, have stored the bulk of what they term their fall varieties. Two causes influenced them: First, operators have been fearful of high prices and have not taken hold; second, many growers believed they would obtain higher prices by placing these early apples in storage for a time. Lately these have been coming on the market, and the shipper, despite his attempt to so manipulate things as to hold prices up, is paying a slight loss on his venture. The cost to the consumer runs up to \$4 a barrel in numerous instances on best qualities, a prohibitive figure if liberal consumption is desired. New York's total crop is estimated at fifty per cent of last year, with the shrinkage principally in Baldwins. Any section of the country which has a surplus will find a ready market for Baldwins in New York and vicinity.

Whether it bodes good or ill for the future, it is the truth that not for twenty years has speculative interest in apples been as light as it is now at this season of the year. The big operators have not dared to respond to the high views of growers, and apparently a larger proportion of this year's output will be shipped to market by the growers themselves.

Probably the market will be irregular, since when growers ship they generally do it at times when they need money. Sometimes it comes about that a good many ship about the same time, and this, of course, leads to reduced prices and corresponding advantage to receivers and distributors.

So far as can be ascertained, substantially similar conditions are present all over the country.

It would appear from what I have seen and heard of late that the grower of the Middle West will ultimately benefit by the conditions which govern in New York.

Co-operation in Buying Rams

THE cost of a pure-bred ram—and no other should ever be used—is a serious consideration to the owner of a small breeding flock. If our importers and breeders would adopt the English custom of letting rams for the season much of this difficulty would be removed; but since this practice, for many reasons, is not likely to become general with us, the best way would be for neighboring owners of small flocks to combine in the purchase of a really desirable ram. An animal of this class can be safely depended on to serve from fifty to sixty ewes, and the division of his time between two or three small neighboring flocks could easily be arranged, as the time at which each man desired his lambing to take place might vary.—J. P. R.

Hold Your Hogs

By L. K. Brown

DECIMATION of the winter's pork supply has continued apace. Disease has spread to new territories exacting its toll and compelling many growers to clean up on all healthy hogs, thus keeping up the liquidation of thin sows and pigs which began in August. The number of pigs which have appeared at the stock-yards has become alarming. Some days as high as forty per cent. of the receipts are in the pig class, and the average for some time has been twenty-five per cent. It is evident what effect this continued sacrifice of shoats will have on the winter markets. With the coming of colder weather, disease will greatly disappear and the scant supply then in the growers' hands will be fed out. The market will lose its present erratic nature and take a steady stride with advancing figures. Everywhere high prices are expected after the holidays. Receipts right to-day would be very small were it not for the supply of this unfinished material. While this maintains the supply and temporarily aids the shortage, it does so at a greater cost, to be felt later.

There is a general increase in foreign demand for lard and in southern demand for bacon. Other oils which can be substituted for lard have not been produced in normal quantities the past season. Thus the shortage of lard caused by the sacrifice of so many thin hogs is increased. The advice sent out by commission houses everywhere is to hold hogs and feed them out unless disease has appeared in the herd.

Look for Cattle Scarcity

THE drought drove over a hundred thousand cattle into the sale-pens of the Kansas City yards September 4th. The money changed hands at the rate of \$3,000 a minute. The general soundness of farm conditions was proven by the fact that the myriads of thin cattle were taken by the country buyers, and the prices remained firm under the greatest onslaught of sellers ever known. After these cattle are worked off there will be a big vacant spot on the cattle map, which may be expected to cause a scarcity.

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The FARMERS' LOBBY.

The Farmer Likes His Profits, Too

By Judson C. Welliver

THE substitution of community credit for individual credit is the basis of the "agricultural credit" projects that are nowadays so much discussed. It will violate no confidence to say that President Wilson is in favor of having a new kind of banks chartered in this country, either by Nation or the States, with power to make this substitution and to give the agricultural community the benefit of the saving.

In the largest view this plan aims to end tenant-farming by making it possible for the tenant to buy his land; to enable the landowner to finance his crops, live stock, improvements, etc., on terms that will not take away all his possible profit; to give the farmer the benefit of cheap money which the community as a whole already enjoys, and which great corporations, the cities, school districts, drainage districts, and the like, also enjoy.

Let this point be illustrated with the figures on some specific transactions. Recently the City of New York issued \$25,000,000 bonds at four and one-half per cent. which sold at 100.158, making the net rate to the city 4.25 per cent. That seems like cheap money, to a farmer accustomed to pay six, seven, eight, nine, ten or, as in some States, as high as twelve per cent. New York could get money at that low rate because community credit is superior to individual credit. How can the individual farmer get the advantage of the low rates that community credit enjoys?

Here is the answer: Just about the same time that New York City sold those bonds, the land-mortgage bonds of the Kingdom of Bavaria, in Germany, were selling at ninety-eight. These Bavarian bonds run fifty-four and one-half years; interest rate, four and three-fourths per cent.

But there is this striking difference between the New York City and the Bavarian bonds: that at the end of fifty years of paying four and one-half per cent., New York will have the principal fall due, and must pay it; whereas the Bavarian land bonds, paying four and three-fourths per cent., will have wiped out their principal, and when the last payment is made the principal sum will have been discharged and the mortgage released!

Those Bavarian bonds are sold for the purpose of raising money to be loaned to farmers. The farmers get it at that low rate of interest, simply because their credit is pooled together, exactly as the credit of all the people of the United States is pooled together as security for a three per cent. government bond or a four and one-half per cent. New York City bond.

Think of being able to borrow money at four and three-fourths per cent. for fifty-four years, and never having to pay the principal at all! That is what the Bavarian farmer does.

The amount that American farmers now pay for interest, without getting any reduction of their principal, would in thirty-three and one-third years pay off the entire debt, interest (\$510,000,000) and principal (\$6,500,000,000), under Bavarian conditions!

Why Compel the Farmer to Use Short-Time Loans?

HEAVY as is the interest burden of the American farmer, the mere rate per cent. is not the worst feature of it. The almost impossibility of getting money for very long periods, as the farmer needs it, is another very serious element. Not only must he borrow for a comparatively short time, but he has no certainty that he can get a renewal, or a new loan, at the end of that time. Ordinary commercial banks do not want to loan for long periods; it isn't their sort of business. A long-time loan on absolutely good security is always snapped up by investors as a good thing; wherefore state, national, city and railroad bonds sell at low rates because they are made for long time; but the farmer, whose business turns more slowly than any other, who needs long time, in the very nature of things, more than anybody else, cannot get this very advantage. It is community credit that alone can give him that. If, as a gigantic community transaction, the debt of all the farmers in the United States could be refunded it probably could be placed at just as low a rate as the Bavarian land bonds bring. Of course, however, it is not practical to think of making that gigantic transaction all at once. But without doubt it is perfectly

feasible to approximate to that end in time, by adopting the system that has accomplished this abroad. Collective credit will bring advantages to American agriculture that have not been dreamed.

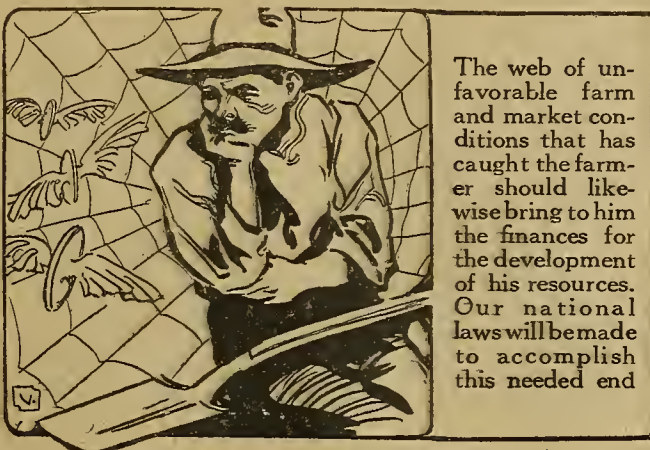
Capital, to be hired at the most advantageous rates, must be taken for long terms, in large amounts, in such form that the loans are easily managed, and the payment made absolutely certain. The instrument representing such transaction must be free of taxation, or approximately so.

Why not? This principle of finance is firmly established; communities issue bonds that they do not tax. The trouble is that down to the present time, in our country, this plan of collective credit has been made to work almost exclusively for the cities and towns rather than for the farmer.

A System Also Gets Rid of the Principal

IN OTHER countries they have realized what this discrimination against the farmer means, and have devised methods to extend him the benefits of collective credit precisely as municipal, state and great industrial or public service corporations enjoy it.

In the case of the Bavarian land bonds the farmer was charged four per cent. interest, one-fourth per cent. as the land bank's commission for administration, and one-half per cent. for amortization; that is, for the discharge of the principal of the debt. Total, four and three-fourths per cent. As this one-half per cent.



The web of unfavorable farm and market conditions that has caught the farmer should likewise bring to him the finances for the development of his resources. Our national laws will be made to accomplish this needed end

is paid on the principal, the actual interest rate of the farmer is four and one-fourth per cent. At first thought it will seem remarkable that an annual payment of one-half per cent. will be enough to discharge the principal of the loan in something like fifty-four years. But it is, and the explanation lies in the fact that the principal is being constantly reduced, the interest charge grows smaller, and the proportion of the total annual payment applicable to reducing the principal correspondingly increases. The entire charge is spread in uniform annual amounts over the entire period for the sake of convenience and uniformity in accounting, etc.

Now we want to learn what are these land bonds. It is to be understood that the bonds are what we would call in this country, debentures. A land bank loans to the farmer up to sixty per cent. on his property, and takes his mortgage, running to the bank. In a short while it has taken in an aggregate, say, of \$3,000,000 of these mortgages. Then the entire batch of mortgages are pledged as collective security for an issue of \$3,000,000 of the bank's bonds. These, guaranteed by the deposit of the mortgages and also by the general credit of the bank, are offered to the public. The system is such that they are regarded as gilt-edged; they run a long time; the investors gladly snap them up. The money thus taken in for this issue of bonds is then loaned out again on more individual mortgages, which in turn are pledged as security for another bond issue. The endless chain is at work for the farmer's credit. At all times the bank must have on hand a total amount of first mortgages equal to the aggregate of the bonds it has issued. The bonds are retired exactly in the proportion that the mortgage principal is paid off.

The land bank makes a charge that, in Germany, runs from .25 to .35 of one per cent. for its services

as administrator, its guarantee, etc. The borrower is charged an interest representing the price at which the bonds sell, plus this administration charge.

To establish such a system in this country requires, of course, to adapt it to our peculiar American conditions. The need of it nobody doubts. Recently the Department of Agriculture investigated interest rates paid by farmers all over the country. It was found, through statements made by several thousand banks in answer to questions, that on all loans to farmers, secured and unsecured, the average rates run from a trifle under six per cent. in most of New England, New York, Pennsylvania and New Jersey, up to 10.57 per cent. in Oklahoma, 10.57 in New Mexico, 10.15 in Arizona, 10.13 in Montana, 10.70 in North Dakota, 9.97 in Texas, 9.48 in South Dakota, 9.98 in Georgia, 8.80 in Florida, 6.23 in Ohio, 6.47 in Indiana, 6.31 in Illinois, 6.88 in Michigan, 6.24 in Wisconsin, 7.93 in Minnesota, 7.21 in Iowa, 7.28 in Missouri, 6.86 in Kentucky, 8.28 in Tennessee, 8.26 in Mississippi, 8.33 in Louisiana, 9.67 in Arkansas, 9.37 in Wyoming, 9.24 in Colorado, 8.61 in Utah, 9.03 in Nevada, 9.92 in Idaho, 8.99 in Washington, 8.32 in Oregon and 7.44 in California.

It will be observed that the highest rates are in the territories where the farmers' necessities are greatest and in sections where new development is in progress, and therefore a larger part of the needed capital must be borrowed. I have quoted figures for the year 1913, which average a very little lower than for 1912. In 1912 the average for Oklahoma was 12.10, and for North Dakota 10.89.

The answers which the bankers wrote, explaining the high rates to farmers, were very illuminative. Especially is it made plain that, by reason of the very nature of his business, the farmer must expect, under present conditions, to pay rather more interest than anybody else.

The Farmer Works His Money Hard

BROADLY, banks accommodate their interest rate with reference to the average balance the borrower may be expected to carry in the bank. A business man borrows \$10,000 for ninety days. Its experience with that man justifies the bank in expecting that his daily balances throughout that ninety-day period will average \$5,000; therefore it shades the rate of interest to him. But a farmer borrowing money is likely to take the entire amount away in his wallet, and to maintain a mighty unimportant balance during the period the loan has to run; then he will sell a bunch of hogs, cattle or a bin of wheat, and, with the proceeds pay the loan. Because of such conditions, the farmer must of necessity pay higher rates for his money because, it might be said, he uses it harder.

But the great difference between the farmer and the other classes of borrowers is that the farmer needs his money for long periods, and commercial banking does not contemplate that kind of loans.

It has been observed that our problems require special attention given to our peculiar needs. For instance, if land-mortgage banks are to be chartered, shall they be national? Shall it be attempted to make the whole Nation into one great land-mortgage district?

There are many arguments in favor of having state instead of national banks. But, if so, how is any particular State

to be induced to organize them? What sort of steps can the National Government take to get the States to charter such institutions? These and many more are questions that public men in Washington and students throughout the country are now asking.



The banker who lets time pass without recognizing the needs of farm development does not see the signs of the times



The Burden of Yesterday

By Adelaide Stedman

Illustrated by R. Emmett Owen



Synopsis of Preceding Chapters

A girl appears mysteriously in Mr. Drake's office. She introduces herself as a friend of his friends, Mr. Cumnock and his daughter Ernestine, and asks to borrow ten dollars. Drake gives it and finds himself thinking about the girl.

Drake supports his widowed sister-in-law and two children, and his money flows rapidly through her extravagant fingers. When, therefore, she receives the offer of a home elsewhere, shackles seem to drop from him. On going to his office he receives a call from Mr. Cumnock and Ernestine, and he accepts with enthusiasm an invitation to Ernestine's graduation exercises at the school, where the mysterious girl, Faith Hamilton, turns out to be a teacher.

Ernestine begs to go to the roof of the Singer Building, where Drake has his office, and he sends her up with his secretary, Robert Lewis.

Chapter III.

ERNESTINE'S cheeks were scarlet with excited anticipation by the time the express elevator landed her and Robert at the top of the giant building. The boy's manner was a little shy, though very friendly, so for the first few moments they stared down silently at the pygmy panorama of lower New York. Only the buildings, were sky-searching. Ernestine was fascinated by this Lilliputian world; but she was too young to be impressed. The streets of a world city were only streets to her.

Very soon she turned back to Robert to find him staring at her with a look of puzzled recognition.

He started and blushed, a quick, abashed expression replacing the curious one.

At that look Ernestine seemed to half recall something too. "Have we met before?" she questioned, with a sudden appearance of two coquetish dimples in her pink cheeks.

Then abruptly Robert's memory focused itself. He saw a little girl in stiff, starched white, who stared at him child fashion for a few minutes, then dimpled and turned friendly.

"It was in Mr. Drake's old office ten years ago," he muttered painfully, a grim look, the look of having lived and endured, for a moment driving the youth from his face.

Then Ernestine, with a tremendous though delightful inward shock, remembered too.

"Oh!" she began, recalling a ragged, frightened, little office-boy who seemed continually surprised that she was talking to him. "You're not—"

"Yes. It was my first day at the office," Robert prompted.

The import of what she was hearing began to dawn on Ernestine.

"Oh, I remember *everything*," she broke in, with such hearty approval in her eyes as they scrutinized the well-groomed, frank-looking young fellow beside her that a flush of pleasure began to replace the dull red of painful embarrassment on the boy's face. "I remember *everything*," she repeated. "And you are Mr. Drake's private secretary!"

This little episode appealed to her immensely. He was a hero to her young imagination, this boy who had risen from the streets and was clean and manly.

"Aren't you proud?" She laughed at his embarrassment and went on confidentially. "I know what it is to start from the bottom! Though I was awfully little, I can remember the time before Daddy sold his land, when we used to eat frijoles (that's Mexican for beans) for our dinner a great deal oftener than meat, and I used to walk barefooted to the old adobe schoolhouse two miles away and thought my one precious red hair-ribbon the most beautiful thing in the world."

"My folks," said Robert, "were farmers too."

Ernestine smiled contentedly at the friendly reassurance in Robert's voice. "But I can't remember the farm at all."

"I'm glad I can," the girl returned cheerfully. "It keeps me from ever getting snobbish. It's so easy to think you are a little better than other folks when you have plenty of money to spend."

The soft summer wind caught little tendrils of her black hair and nodded the flowers on her small modish hat. She was very sweet to look upon in her fresh young beauty. That was what Robert thought as he responded hastily, his fascinated eyes on her face, "Oh, I don't deserve any credit. It would be a poor sort of fellow who wouldn't succeed with a man like Mr. Drake behind him!"

"He's a dear!" Ernestine enthused. "I remember I kissed him good-by when I was in his office that day years ago, and I used to hate to kiss people."

"He's great!" Loyalty, love, intense conviction, vibrated in the boy's voice. "He's done so much for me that sometimes I almost wish things would go wrong so that I could do something for him."

"I know just how you feel!" Ernestine broke in, "because I have a friend like that, only mine's a girl—Faith Hamilton. When I first went to boarding-school she was my roommate, though she's five years older than I am. And she was a perfect angel! I should have died of homesickness if it hadn't been for her, and she's been heavenly to me ever since. We used to have the most glorious times! Then three years

ago her father died, after losing all his money." Her face saddened as she recalled this first tragedy that had come into her experience. "So now Faith takes care of herself and her little sister Bereuse by teaching natural history up at school. And I'm just *wild* to do something for her, but she's so proud!"

The two nodded at each other, pleased at this community of interest.

"I just can't persuade her to go with us to our summer place near Tarrytown."

"Near Tarrytown?" Robert exclaimed, then blushed, conscious of the pleased surprise in his voice.

"Yes; why?"

"Oh, nothing. I'm going to a boys' camp near there."

"You are!"

"Not a regular camp," the boy hastened to explain.

"There's a society called 'The Big Brothers.' Each man takes charge of one boy," he hesitated, then went on slowly, "a boy who has been in the Children's Court. And he makes himself responsible for him, just as if he were the little lad's older brother. It's a great idea!"

Ernestine nodded, warmly interested, so Robert continued with animation.

"I've learned a little about gymnasium work over at the Y. M. C. A., so I thought I'd go up and help as a sort of athletic coach. Mr. Drake is willing."

"May I come over and help, too, sometimes? I can swim and row, and I just love naughty little boys!"

Ernestine's happiness was obvious. What a glorious world it was! How splendid to belong to a country which produced William Drakes and Robert Lewises and Big Brothers! How interesting it was to be out of school and dipping one's thumb into the big human pie. By and by she might pull out a plum!



They stared in silence at the pygmy panorama of lower New York

Suddenly from the elevator appeared Mr. Cumnock and Mr. Drake looking greatly amused at something.

"Well, Erny, you must be enjoying the view," Mr. Cumnock remarked dryly.

Ernestine and Robert blushed. They *had* come up to look at the view.

"It's wonderful!" Ernestine murmured enthusiastically.

She was looking at Mr. Drake, whose figure had grown to heroic size in her imagination. And, suddenly, into her innocent generous mind a daring thought darted. William Drake would make an ideal husband for her other idol, Faith Hamilton.

Chapter IV.

ON MR. DRAKE'S arrival at home, and again at breakfast the next morning, the sole topic of conversation was Jobyna Price's letter. Laura had retired to bed with a headache; so mother and son planned undisturbed. Mrs. Drake was like her old-time self, the mother of his boyhood, all of the watchfulness and repressed malice had gone out of her eyes, and Drake was quick to analyze the change and join in her relief.

Consequently, with his mind full of home affairs, it was eleven o'clock on the morning of Ernestine Cumnock's graduation before it occurred to him that he

had neglected to order any flowers. He rang for Robert.

"Go to Beuckley's and order some flowers to be sent to Miss Cumnock right away."

"Yes, sir." The words came with eager promptness.

"Here are the address and the necessary money," Drake handed Robert a card. "Now hustle, I'm late already."

Drake had been thinking of Robert a great deal of late, planning for his future with affectionate interest. Ten years before, on the great day when he had just organized his New York office, he had been attracted by the articles and editorials written about the opening of a new institution, the Children's Court, and telling of the forlorn, pitiful little urchins who had passed through it during its first day, ignorant little victims of false environment.

In need of an office-boy, the idea had come to him, as part of his feeling of good will toward all the world, to take one of these little waifs and give him a fresh start in life. Acting on the impulse, he had gone to the court, then in the midst of its morning session. Several cases had been disposed of before any "possibility" appeared. Then Robert Lewis was called before the kindly old judge's bench, and Drake felt himself drawn in pity to the pale, wide-eyed youngster, in his dirt and rags, whose "misdemeanor" was eating six cream puffs out of a baker's wagon.

Robert's defense had been tear-stained and contrite. He urged as extenuating circumstances that "the paper got teared, and I could see the yaller stuffu", and it looked so prime, it made me remember how tired I was of beaus and 'taters." Another boy had been concerned in the mischief, but he had escaped.

Robert's parents, it had developed, were country people whose played-out farm had forced them to find work in town, where both of them had early succumbed to the industrial disease. The old woman in whose lodging-house the little waif had stayed had worked him like a galley-slave for his keep, and the court had been about to send the boy to a home, on the charge of improper guardianship, when Drake stepped forward and made his request. The judge had been only too glad to put the boy on probation and give him his chance; so Drake had drawn his little charge toward him, his throat contracting with pity, as, clasping the ragged jacket, he had seen nothing but a forlorn scrap of suspender between it and the boy's little shrinking nakedness.

Drake thought over all these things as he sat alone in his office. He had never regretted that day. Not an angel by any means, but a human boy, quick, bright and affectionate, Robert had quickly turned normal, with no wrong instincts. At twenty-two he had become his employer's private secretary. No one, except those immediately concerned, knew his story. He had in earnest begun again. Drake felt almost a father's pride in his protégé. In spite of his still boyish exterior, Robert was a man now, his character formed. What did the future have in store for him? What would he make of his own life?

While Mr. Drake was musing, Robert's thoughts were on the same subject, as he executed his congenial errand. Ernestine Cumnock had turned his thoughts toward himself. He was conscious of a worshipful admiration and of a queer, boyish desire to perform some wonderful athletic feat for her benefit that summer. Innumerable times he recalled their conversation on the roof and thought of the clever things he might have said and hadn't. Never would he forget the sweet look in her eyes as she had exclaimed:

"Oh, I remember *everything*!" Of course, he thought she meant his Children's Court experience, not dreaming that Ernestine had never heard that story and was referring only to his rags and apparent poverty.

Filled with such thoughts, he purchased the flowers, a dozen pink rosebuds, and started to leave the shop, when a jar of velvet Jack roses caught his eye. Robert hesitated, then turned back, a sudden desire to send those beauties to Ernestine strong upon him. The sweet temptation was too strong to resist. With a face almost as red as the roses, he made the extra purchase. She would never know of his presumption. They would go with Mr. Drake's card.

Chapter V.

THE Palisade School made itself gay for commencement. Brilliant June sunshine sparkled on the Hudson, made less grim the gigantic Palisades along the Jersey shore and glistened on the wooded New York hill which held the school on its summit.

The American flag and a bright school pennant fluttered from the building's dome, and all morning long hurrying files of girlish figures went from room to room with flowers, tulle, ribbons and great green branches expressing the spirit of the day.

Faith Hamilton was in demand everywhere. All of the pupils felt that she understood them and their grievous difficulties. Faith enjoyed the bustle, the girlish arms about her waist, soft cheeks pressed to hers, as her ears were assailed by explosive and excited whispers. [CONTINUED ON PAGE 19]

Sunday Reading

By Merle Hutchinson

An End of Wandering

Sunday-school lesson for October 26th: Sin of Moses and Aaron. Num. 20, 1-13.
Golden Text: Let the words of my mouth and the meditation of my heart be acceptable in thy sight, O Jehovah, my rock and my redeemer.

FEW incidents from the thirty-eight years of Bedouin life have come down to us in the Hebrew Chronicles. The people moved about in the northern part of Arabia as they found themselves in need of fresh pasturage or water, and avoided the fierce tribes between Arabia and Palestine. The life must have been peaceful and monotonous. It was the time of waiting, like the winter season, when trees and grasses and shrubs lie dormant, waiting for the springtime that shall prove what life be in them.

Kadesh—The Grand Canyon of Arabia

The few stories that we have from this period cluster around Kadesh and Mount Hor. Kadesh is believed to be Petra, the wonderful city, lying at a mountain's foot in northeastern Arabia, discovered and excavated in the last century. It has been deemed always by the Moslems a most holy place, and they have kept the name of Moses for mountain and spring of water, and point out the burial-place of Aaron. Few travelers penetrate to its wild beauty, but Stanley's description of it is vivid, and reminds one, by its rock-hewn temples, its caves in the surrounding hillsides, its steps leading from height to height, its entrance by a rocky defile and above all by the glowing colors of its time-worn rocks, of our own Grand Canyon, more than of anything on this side the earth. Near here was the burial-place of Miriam, the leader of the Hebrew women, and here at Mount Hor was instituted on the death of Aaron, the first high priest, the impressive custom that held till the final dispersion of the Jewish people—the arraying of the successor in the robes of the dying chief. Aaron, "full of years," was taken into the mountain. With him went Eleazar, his son, there to put on the priestly robes, to await the aged father's death and burial, and thence to return to the waiting and awe-struck people, to take up the tasks his father had laid down.

Very Eager for Fighting

The gigantic caravan had now turned northward, toward the Promised Land. They soon met their first opponents, conquered them and found themselves safely encamped in the beautiful grazing country that lay to the east of the Jordan. As Josephus naively puts it, "And now the Israelites began to be very proud of themselves and were very eager for fighting." So much had these years of wilderness life done for the cowards who, a generation ago, had fled before a tale of giants.

Intensive Character-Building

Epworth League Topics: October 26th, Christ and the Modern Social Impulse; November 2d, Are We Training Ourselves to Serve with Scientific Efficiency?

EFFICIENCY is the cry of the decade. It is such an inspiring and such a practical aim that one hopes it is to become a definite and permanent idea. Out of doors we call it intensive farming. It is the doctrine of not only getting all that can be got out of an acre of land, a piece of cloth, an hour of time, but it is seeing all the possibilities about one. It isn't a new idea. Only its definite statement as a theory is new. When one stops to consider that the greatest powers that history has known were nations dwelling in so small a space that the little New England States could surround almost any one of them, one wonders how great this Nation could become if every town, every county, every state, were absolutely making the most of itself. That means more than not wasting land or energy; it means not wasting men and women. Not letting them go wrong, and using the wisest means to bring them back into the ranks of the valuable members of society. There is a strange power of interaction in human life. Intensive farming, for instance, makes for a superior human product. To do your work intelligently and thoroughly has its effect on the soul. The man and the community are very like a bit of land. Put it to a crop, and it grows food. Leave it alone, and it grows weeds.

Three Cheers for Our Boys

In this recent concerted effort to turn out in this country better products of all sorts there is no more interesting ex-

ample of what can be done by effort and common sense than the Boy Scouts' part in the recent Gettysburg celebration. Five hundred boys, between fourteen and seventeen years of age, from different parts of the country, were detailed to help take care of the veterans. A few years ago I fancy no one would have thought of turning five hundred lads, at their most restless and uncontrollable age, loose in the midst of that great gathering, and depending on them to help keep order and prevent accidents. Yet that is what their leaders counted on, that is what the public expected, of those boys, and they were not disappointed. There they were on duty all night as well as all day, meeting the old soldiers at the trains, helping them find their companies, aiding the Red Cross surgeons, guarding against roughs and patrolling the whole great tract of land, in search of exhausted or injured or lost old soldiers. The low mortality record in that great concourse of aged men, in the intense heat of July, is said by the physicians in charge to be largely due to the intelligence and constant activity of these khaki-clad lads. They were just our ordinary boys, such as every village has on its streets, but they had been trained to the ideal of efficiency, and it had not only made their heads and hands intelligent, but it had made them manly, public-spirited citizens.

An Unwilling Prophet

Sunday-school lesson for November 2d: Balak and Balaam. Num. 22, 2-6; 24, 10-19.

Golden Text: A double-minded man, unstable in all his ways.

CURSES have grown somewhat out of fashion as the world has grown older. I know a little homestead where, as successive owners come and go, the neighbors comment, half humorously, half meaningly, "Old Mother Cone's curse again. No one ever succeeds there." But when the Hebrew tents were spread beneath the acacia-groves in the plains of Moab there seemed no surer way of fighting this terrible horde that came on, fearless, under the orders of Jehovah, than to get a prophet, a seer of fame as great as that of the Hebrew captain, Moses, to wither, with prophecies of ill, the mighty army.

Balaam's Journey

Three times across weary stretches of desert to the banks of the Euphrates the frightened Moabites sent to the famous soothsayer, Balaam. An astute watcher of events, as Balaam must have been, he knew quite well what the return of this great people meant. But it was a temptation to be sent for, to have his words of so great moment, to be measured with Moses, and at last he yielded. We have the story of the ill-treated beast and the warning from the angel of the Lord as he pursued his foolish journey, and then we have one of the most splendid pictures in all the Bible history. As one reads one can almost see the sight that burst upon his startled eyes from Mount Peor; the tents spreading far, the tabernacle in the midst, the orderly arrangement of the tribes. Much as he desired the praise and the honor that were his if he put heart into the Moabites by a denunciation of their foes, he may not deny the enthusiasm that sweeps over him at the spectacle, and he pours forth the first great vision of the effect this mighty people should have upon future ages. His is the first mention of the world of the west. "And ships shall come from the coast of Chittim." Ceylon, the farthest land then known. One phrase in the glorious poem in which the prophecy is couched is strikingly like the words of that more modern prophet, John Milton. Writing in the days when England was torn by faction and civil war, when many of her strongest citizens were fleeing to this then distant and unknown land, he says, "Methinks I see a noble and puissant nation, rousing herself, like a strong man after sleep, and shaking her invincible locks; methinks I see her as an eagle, mewing her mighty youth, and kindling her undazzled eyes at the full midday beam." So Balaam, with far-reaching thoughts, cries out, "Behold the people shall rise up as a great lion and lift up himself as a young lion. . . . How goodly are thy tents, O Jacob, and thy tabernacles, O Israel."

Your child may be angelic, in your eyes, but it's up to you as parents to make the neighbor's consider that self-same child even passably nice.

After Dark Chores are Easy for Jones

Jones has a big Acetylene light in his barn.

A big, round, brilliant, white light.

A light he calls "the sun's little brother."

This big light is solidly fastened to a heavy timber, and unlike Jones' old oil lantern, it can't be tipped over.

Jones turns this high candle power light on—without a match, by simply pulling a little wire rod that hangs from the light.

On cold winter nights when its dark at 4:30.

When he gets home from town late—

Or when he has a sick "critter" to look after, Jones finds his big barn light a great convenience.

He says he wouldn't take \$1,000 for it.

Mrs. Jones too, shares in the good thing.

She has acetylene light in every room in her house, and her light fixtures are handsome ornaments of brass and bronze.

Mrs. Jones cooks also on a big gas range—an acetylene range that furnishes heat on tap—just like millions of gas ranges in big cities.

The acetylene which feeds this range and the lights on the Jones' place is, of course, home made.

Jones makes it himself with the aid of a *Pilot Lighting Plant*.

He fills the light machine with UNION CARBIDE and plain water once a month.

This *Pilot Lighting Plant* gives Jones the safest and most practical light and cooking fuel available for country home use.

These Pilot Lighting Plants

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They make Acetylene—a very little at a time—as the burners use it.

The Pilot is one of 600 patented Acetylene machines.

All built on different principles to do the same work.

The test of time has brought "The Pilot" out on top.

The principle on which it works has proved to be the correct one.

Today we sell more Light machines than all other manufacturers in this country put together.

We sell these Pilot plants complete—through three factories and 3,000 local representatives.

We have a big eastern factory in Newark—a big central factory in Chicago and a big western factory in Los Angeles.

o o o

A complete plant includes the machine, gas pipes, light fixtures and the cooking range.

Such a system costs less than a water or heating system. It is quite as permanent as either, and as necessary to make your home modern.

Our 3,000 representatives are residents in the districts they serve.

Each one established in a permanent growing business.

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Gold Coin Stove Co., 8 Oak St., Troy, N.Y.

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"I began to use Postum 8 years ago, not because I wanted to, but because coffee, which I dearly loved, made my nights long, weary periods to be dreaded and unfitting me for business during the day.

"On advice of a friend, I first tried Postum, making it carefully as suggested on the package. As I had always used 'cream and no sugar,' I mixed my Postum so. It looked good, was clear and fragrant, and it was a pleasure to see the cream color it as my Kentucky friend wanted her coffee to look—'like a new saddle.'

"Then I tasted it critically, for I had tried many 'substitutes' for coffee. I was pleased, yes, satisfied with my Postum in taste and effect, and am yet, being a constant user of it all these years. I continually assure my friends and acquaintances that they will like it in place of coffee, and receive benefit from its use. I have gained weight, can sleep and am not nervous."

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HOME OIL STONE



Curly-Locks greeted them all

was three months old, and her mother told her she might have a birthday party and invite all her little kitty friends. In all of kitten land it would have been hard to find a happier little kitten.

Curly-Locks at once decided to ask every little kitty girl she knew. There was Goldie White-Toes and Puffy Silver-Tail and Fluffy Ruffles and Dottie Cream and Beauty Snowball, and ever so many more.

But she made up her mind not to invite a single little kitty boy, as they were not nearly so nice to play with as little kitty girls.

Just a few days before she had been at a party given at Dottie Cream's house, and there were nearly as many kitty boys as kitty girls. And they behaved just like the commonest kittens who have never had any bringing up at all.

They stuck their noses in their milk instead of drinking it out of their little cups, and even wiped their whiskers on their paws instead of using their napkins.

And when a mouse ran under Dottie Cream's chair they all rushed after it and upset poor Dottie on her head so that she had a big lump back of her ear. It hurt her so that she just cried and cried, but none of the kitty boys seemed to care a bit.

When they caught the mouse two of them got to quarreling over it, and one of them slapped the other's face with his paw. The way they scolded each other was not fit for any little kitty girl to hear, so they all ran out of the room and put their paws to their ears. And that was why Kitty Curly-Locks was not going to ask any little kitty boys to her party, which was going to be very refined.

The day of the party Curly-Locks was up bright and early to try on the new dress that her mother had made for her. She felt sure that all her little friends would think it pretty.

During the morning she helped her mother get things ready for the party. When dinner-time came she was so excited that she could hardly take time to drink her milk.

As soon as dinner was over she hurried up-stairs to put on her new dress and shine her fur. Every few moments she peeped out of the window for fear some of her little friends might arrive before she was ready.

Just as she had fastened the last button of her dress, the door-bell rang, and she hastened down-stairs. As soon as she opened the door she caught sight of four of her little guests, who had come to her party in the grandest of carriages.

Fluffy Ruffles was driving and looked too sweet for anything in her big white hat and new dress with short sleeves. Next to her was Beauty Snowball wearing a little lace cap, and beside her sat Dottie Cream with a cunning little ding-a-ling perched on her head. Last of all came Goldie White-Toes dressed all in silk with the latest style bonnet.

Fluffy Ruffles and Dottie Cream had their eyes half closed, just as though they were sleepy. No doubt the road was dusty and some of it got in their eyes. Or perhaps their mothers tied their bonnet-strings too tight.

The next little kitty girl who arrived was Pussy Blue-Eyes. She had brought her doll with her and carried it tightly clasped in her paws. Every little while she would give it a hug so that it would not feel afraid. When Curly-Locks greeted Pussy Blue-Eyes she did not forget to kiss her dolly too.

Kitty Curly-Locks touched noses with all of her little guests, which is the way kittens of Pussy-Cat-Town have of kissing one another. And everyone of her little friends pulled her ears in honor of her birthday.

The door-bell seemed to be ringing all the time, and there were so many little kitty girls coming in that Curly-Locks hardly had time to greet them all. She was very careful not to miss any of them for fear they might think they were not welcome to her party.

At last all of her little guests had arrived, and they at once started in to play some games. They first played puss-in-the-corner, and after that came blind-man's-buff.

When they were tired of playing games Curly-Locks' mother gave them several balls of yarn to toss about. It was lots of fun for little kittens to roll the balls along the floor and then stop them with their paws before they went too far away.

OUR YOUNG FOLKS

Conducted by Cousin Sally

The Kittens' Party—By Harry W. Frees

LITTLE Kitty Curly-Locks lived in Pussy-Cat-Town, which is far, far away from the land of little boys and girls. All the kittens of Pussy-Cat-Town have their birthday's three times a year instead of only once. Otherwise they would be really truly grown-up cats before they could have a birthday party, and that would be no fun at all.

Kitty Curly-Locks was three months old, and her mother told her she might have a birthday party and invite all her little kitty friends. In all of kitten land it would have been hard to find a happier little kitten.

Curly-Locks at once decided to ask every little kitty girl she knew. There was Goldie White-Toes and Puffy Silver-Tail and Fluffy Ruffles and Dottie Cream and Beauty Snowball, and ever so many more.

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When they were tired of playing games Curly-Locks' mother gave them several balls of yarn to toss about. It was lots of fun for little kittens to roll the balls along the floor and then stop them with their paws before they went too far away.

It did not seem more than a little while before they were all called out to the big room for supper. There was a table set for every four little kittens so that none of them would be crowded.

And such a lot of good things to eat were there that every little kitten started right in to purr. Placed on the table all by itself was Curly-Locks' birthday-cake with three little pink candles on top all ready to be lit. And ever so many other things that little kittens like.

After they were all through eating, each one was given either a cup of catnip tea or a cup of milk. Most of them took a cup of milk, and Fluffy Ruffles spilt hers all down over her new dress. Poor Fluffy felt like crying for fear her mother would scold her, but before very long she had forgotten all about it and was purring as happily as ever.

After supper was over Curly-Locks' mother told them a story about the three little kittens who lived in the woods.

After Curly-Locks' mother had finished the story it was time for each little kitten to start for home. And as they said good-by to Kitty Curly-Locks they told her what a jolly time they all had at her birthday party.

Fun for Hallowe'en

DEAR COUSINS—Because Hallowe'en means F-U-N, and because I want to help you to have a good time, I am going to tell you about some interesting things to do to keep everybody busy and everyone laughing.

Try these games, which I am sure will keep two or three or a hundred laughing.

Dodging and Bobbing

Fill a tub with water, putting a number of rosy-cheeked apples in it, and a wee boat. Any boy can make a simple little craft that will float. Place a tin sail upright and a lighted candle underneath. The warm air from the candle will make it sail about. It takes quickness to dodge the boat, duck and capture an apple with your teeth.

The Dancing Pea

Run a pin through a dried pea, place the pin in the small end of a pipe. While you blow in the bowl of the pipe the pea gives a lively dance.

A Tick-Tack That Burr-rr-rrrr's

Take an empty spool and nick the edges of one end rather deeply. Wind a string about the spool after you have run a stick or nail through the center. Hold it against a window, and pull off the string, when the spool will tick-tack and the folks inside shiver.

Drawing a Square That Isn't a Square
Place a mirror in front of you so that you can clearly see your hand; then try to draw a square with the hand you are drawing with covered so that you have to go entirely by what you see in the mirror.

Come, be Nimble!

Fold a newspaper so that it will stand upright upon the floor. Take your left foot in your right hand and your right ear in your left hand, and stoop over and pick up the newspaper with your teeth. To keep people from laughing until tears come you must practise beforehand.

Flying Around the Circle

Take a feather and start it in motion around a clasped-hands circle of people, each of whom blows it toward his neighbor. As the feather is very light, it keeps everyone dodging and blowing.

Jack-o'-Lantern

Carve the face from the inside and leave about an eighth of an inch of the rind uncut. By using this method it is possible to have a face with whiskers or a mustache. When ready for the frolic put in the candle, and light will show through the uncut rind, making a perfect face. This is far better than the ordinary jack-o'-lantern.

Joyously,
COUSIN SALLY.



Four of her guests came in the grandest of carriages



Pussy Blue-Eyes carried her doll



Breads Made with Yeast

By Jessie V. K. Burchard



IN THESE days of bakeries on every corner in town, and traveling bread-wagons through the country, the fine art of bread-making is degenerating. It is too much trouble to mix and knead and bake the beautiful brown loaves, the spicy buns, the tempting rolls. Rather, we resort to the chaffy loaf from the baker, or the rolls that are sure to be sour to-morrow, no matter how good they seem to-day. The best bakers' bread is far inferior to the home-made product, and I rejoice that bread-making, as well as stocking-darning, is being taught in more public schools each year.

The bread-mixer makes the process so easy and simple that almost anyone can succeed in the first attempt. The only trouble in using the mixer is that flours vary so greatly that the quantity differs with each brand used.

To make bread in the mixer, scald a pint of milk, and while it is heating put two heaping tablespoonfuls of lard, two tablespoonfuls of sugar and one teaspoonful of salt into a quart measure. Pour in the hot milk, and when the lard is melted and the mixture is lukewarm put in one and one-half cupfuls of liquid yeast, or one cake of compressed yeast dissolved in warm water, and fill the measure with lukewarm water. Put it into the mixer, and add three quarts of flour, more or less, as each bread-maker must determine by the quality of the flour. Turn the mixer for five minutes, and set it away in a warm place till the dough is well risen. Then it may be molded into loaves, or part of it may be used in a variety of ways.

Rolls—For rolls, a quart of the dough may be reserved, and a tablespoonful each of butter and lard well worked into it. Form into rolls, let them rise to twice their original bulk, and bake in a quick oven for twenty minutes. The rolls may be brushed over with milk five minutes before they are taken from the oven.

Buns—Take a quart of the risen bread-dough, add two tablespoonfuls of shortening, a well-beaten egg, a cupful of sugar, a little salt, half a cupful of warm water and some grated nutmeg. Add flour enough to knead, and when it is well mixed let it rise till quite light. Then mold into buns, let rise again, and bake in a very moderate oven, for the sweet breads burn very easily. For variety add a cupful of seeded or seedless raisins to the bun-dough.

Coffee Cake—The preceding recipe may be used for coffee cake, by making the dough very soft, adding raisins or currants or very thin shavings of citron, as liked. Spread the dough in a dripping-pan, and let it rise. Then spread it with soft butter, sprinkle with brown sugar and cinnamon, and bake very carefully.

Whole-Wheat Bread—This is delicious and healthful, and if served more often would correct a number of minor ailments that manifest themselves very frequently. Scald and cool a pint of milk, or half milk and half water, add a yeast-cake, softened in half a cupful of lukewarm water, a teaspoonful of salt, two tablespoonfuls of sugar and two table-

spoonfuls of butter or lard. Stir in six or seven cupfuls of flour, letting two of them be white flour, and knead till smooth and elastic. Let rise, covered, till doubled in bulk, make into loaves, let rise again, and bake about one hour.

Graham Bread—For an easy and delicious bread take three tablespoonfuls of white flour, scald it with a cupful of boiling water, and beat till it is a smooth batter. Add a pint of Graham flour, a cupful of liquid yeast, or one yeast-cake dissolved in a cup of warm water, and enough more warm water to make a thick batter, which must be well beaten. Let it rise, and when it is very light add half a teacupful of molasses, two tablespoonfuls of sugar, half a cupful of lard, softened, salt and enough Graham flour to make a batter almost too stiff to stir. Fill bread-pans half full of this mixture, let rise, and bake in a moderate oven a little longer than white bread.

Sally-Lunn—This is a fine old-fashioned bread excellent for supper on a cool evening. Beat four eggs well, add a cupful of warm milk, half a cupful of melted butter and one-half teaspoonful of soda, dissolved in a little hot water. Put in one quart of flour, and stir to a smooth batter, add the yeast, softened in a little warm water, and set to rise in a buttered pan, preferably one with a tube in the center. Let rise six hours, and bake in a steady oven for three quarters of an hour. The addition of a cupful of chopped raisins makes a pleasant variation to this recipe.



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Use Fels-Naptha Soap the right way in cool or lukewarm water. Follow the directions on the Red and Green Wrapper.

Fels & Co., Philadelphia



The Burden of Yesterday—Continued from Page 16

It was two o'clock before Faith went to her little room to dress Berenice and herself for the coming exercises. Berenice was quickly dismissed to the proud task of displaying her frock, which had cost her sister the sacrifice of all personal finery. Then Faith was alone.

She was very tired, very girlishly forlorn, this youngest member of the faculty. She had given, given, given, of her sympathy, love and encouragement. Now she needed someone to sustain her. She could hear the happy voices of arriving parents, sisters, brothers, cousins, and she felt very much alone. Suddenly Ernestine rushed in, lovely in her soft white dress, her arms full of flowers.

"Will you put these beauties in water, honey?" she begged breathlessly. "My room won't hold another bunch. These just arrived from Father, Kirk Hazelton and Mr. Drake."

She dropped the armful on Faith's bed. "I must rush now. I'm in the receiving line, you know!" and her white skirts whisked out of the door.

She picked up Drake's flowers mechanically; the roses, pink and red, their secret safe yet, and looked at the small engraved card, still holding the faint, leathery odor of the case which had contained it. It was five minutes before she returned to her dressing, slowly putting on the white lawn she had graduated in four years before. In spite of careful cleaning and pressing, the dress looked a little limp, faintly yellow. Faith's lips trembled. Was it only four years ago that she had graduated? Father and mother had been with her then. Pride and love and wealth had surrounded her. Her flowers had been distributed in teachers' rooms. She choked a little. No girl had been more enviable than the beloved and popular Faith Hamilton.

Where had the promise of that day gone? Faith quivered with longing. Above and apart from the constant ache of her deep loss, she was conscious of a great restlessness. Hungry for something, she stared down the sunlit Hudson to where the smoke of the great city drifted. She had never left the nun-like seclusion of the school-girl world. There she was at twenty-four, still wearing her commencement gown; thinner, her face changed and spiritualized by suffering, but just as young, just as virginal, as untouched by life, as those of the group of young girls standing in the assembly-room below, their radiant eyes all turned down the river toward the great city.

Faith still stood at her window when half-past two chimed on the hall clock and Ernestine came rushing in for the second time.

"Faith darling, I never knew you to primp so long! Why, what's the matter?" Her arms went about the older girl.

"Just a little private weep." Faith tried to smile, comforted by the loving touch, even as she shook the tears from her cheeks.

Ernestine's arms tightened. "But the exercises are beginning!" she exclaimed, and, catching Faith's hand, she ran with her, breathless and thrilled, into the assembly-room.

The thirty graduates took their proud places on the platform. The ceremonies proceeded, and parents glowed and smiled with pride.

Drake felt himself curiously old in this atmosphere. One of the girls had said, on introduction to Mr. Cumnock and himself: "How do you do, Mr. Drake. I'm so enjoying meeting all of the girls' fathers!"

"I wish I were a father," he had said, the lines about the corners of his eyes in evidence. And he had turned away filled with the same curious hunger and restlessness which had assailed Faith. For him, also, the years were passing. Experience and self-sacrifice had schooled him, but he too was young, younger than the college men with their blasé airs. The grindstone had claimed him as a boy and had held him until to-day he looked up for the first time with unpreoccupied eyes. And he had seen youth and the beginning of romance, and they had respectfully passed him by as one of the elders—he, who had no youth, no romance, no—The lights went out.

"The flower tableau!" announced a variegated whisper.

Behind the scenes was confusion. Faith had worked hard over this picture, her contribution to the entertainment, and now, at the last moment, unfortunate Susan, as usual, was in difficulty. She, with her abundant red curls and statuesque figure, was to be Flora, goddess of flowers, and now, at the psychological moment, she had fainted.

"The tableau's ruined!" "After all our trouble!" "What shall we do?" wailed disconsolate voices. "No one else knows the pose." There was a hopeless silence.

"Faith, you do!" Ernestine exclaimed with sudden inspiration. "You be Flora!" "Yes! Yes! Miss Hamilton! Oh, thank goodness. That's fine!" came the response.

"I can't!" Faith denied. "This is for pupils! What would Miss Kershaw say to a teacher's being the central figure?" The girls didn't listen. With laughing, excited eagerness they brushed aside her objections.

Down came her hair. On went the gauzy robe, the sandals, the flower crown. Her hands closed over the wand of authority. Whispering groups of roses, lilies, poppies, grouped themselves about her; mischievous eyes, bright with triumph, smiled up at her. A bell tinkled,

the curtains parted and Queen Flora and her subjects were looking out into the dim auditorium. The tableau was exquisite. The little incident, giving them for their queen their adored Faith Hamilton, starry-eyed and shy, lent a sudden reality to their attitudes of homage.

For several moments the charm held, then the spell broke. Applause, voices, lights, brought back the commonplace. Undergraduate ushers hurried down the aisles with bouquets. The exercises were over. Mr. Cumnock and Mr. Drake drifted to the veranda, where presently Ernestine joined them, all the joy gone from her face, her eyes red.

"Why, Erny, what's wrong?" her father demanded, astonished.

"It's Faith!" Ernestine frankly sobbed. "I can't bear to leave her here in this deserted old place all summer. I've begged her to come with us, but Miss Kershaw will pay her to stay here to interview parents who come during vacation, and Faith needs the money."

Drake's interested, sympathetic face caught Ernestine's attention, and her innocent match-making scheme flashed through her mind again.

"It's to keep Berenice here at school, I know," she went on, her eyes on Mr. Drake. "Faith's the most unselfish girl in the world!"

"Father, can't you think of some way to make her come with us? I could shake her for her silly old pride!"

Mr. Cumnock saw that his daughter was much upset. "Where is Faith?" he questioned briefly.

"In the parlor. I told her you'd want to say good-by."

Mr. Cumnock strode off.

"Don't forget Mr. Drake," Ernestine said, "that you're coming to visit us too. It's going to be my first house-party, and you can't refuse."

Then some friends of Ernestine's interrupted, and talked until Mr. Cumnock and Faith appeared on the veranda.

"Well, Erny," Mr. Cumnock chuckled slyly, as they joined them. "I've qualified for a diplomatic post. Miss Hamilton is coming."

Ernestine threw her arms about Faith. "Drake, you've got to come out and keep me company," Mr. Cumnock growled. "I can't live in a regular seminary."

Ernestine, radiant now, broke in. "I suppose you and Miss Hamilton ought to be introduced properly," she laughed.

Faith blushed; her shy, confused smile was very lovely. Suddenly Drake felt young again. Miss Hamilton did not rank him with the fathers.

"I'll be glad to run out and stay with you a while," he accepted.

Ernestine's cheeks turned carnation pink. She fancied herself as a match-maker.

[CONTINUED IN NEXT ISSUE]



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Boil, Caldron, Boil

By L. M. Thornton

FILL a large caldron, or kettle, with sawdust, and into it drop small articles of all kinds—a thimble, a cracker, a little doll, animals from a very small Noah's ark, a tiny paintbrush, a bit of lace, a ribbon bow, a small wishbone, a ball, a few coins of different denomination, a pen-point, a small pencil, a ring. In fact, there seems to be no end to the things a clever hostess can provide for the filling of the caldron. When the guests have arrived let the "witch" take her place beside the caldron armed with a big wooden or iron spoon. When she raps upon the kettle all give attention and one by one approach her. To one she hands the spoon, asking that it be dipped into the sawdust and brought out as well filled as possible. From the articles

which she finds in the spoon as she blows away the sawdust she reads the future, the thimble signifying a seamstress, the cracker a cook, the doll a lover, the ring a wedding, the coin a gift, the wishbone good luck, and so forth.

In preparing the treasures for the caldron be careful to have each so small that from three to ten can be brought out.

Witch-Hazel and the Magic Mirror

By Gwendolyn P. Stokes

WE TRANSFORMED the parlors into an imitation forest. Bright autumn leaves decorated floor and walls, soft ferns and berries mingled with great boughs of oak and fir; rosy-cheeked apples peeped from among heavy green branches; Jack-o'-lanterns shone weirdly through the vines; pumpkins with fantastically carved faces were hidden in every conceivable nook and corner. In one spot a row of tiny pumpkins caught the attention of all, and closer inspection revealed on each yellow stem a tag marked with a guest's name. Inside were picnic luncheons characteristic of Hallowe'en. Later, when seated snugly about the cheerful log fire, apples were toasted and corn popped, to the accompaniment of thrilling ghost stories.

Just at the stroke of midnight (if possible a cuckoo clock should be on the mantel) "Witch-Hazel" was consulted in a leafy bower, where she distributed hazel-nuts from a huge orange and brown basket, each nut containing a fortune written on a bit of paper. A red light cast a mysterious glow about the gipsy nook. As the merry consultants moved away they were whisked aside by ghosts (clad in sheets), who read their palms and practised other Hallowe'en charms. Then "Witch-Hazel" rose and weirdly informed them that if they placed their hazel-nut containing the fortune beneath their pillow the face of their future mate would be revealed to them in their mirror when they first arose the next morning.

The Fires of Fate

By L. M. Thornton

SOAK a piece of thread in a strong salt solution and let it dry. Secure as many very light rings (a bit of coiled wire will do) as there are players, and fasten a piece of thread to each, using that which was soaked in the saline solution for two of the rings. Hang the rings to a long line and let the players each choose one. When all have chosen touch a match to the threads; all but two will burn. The two soaked in salt will hold the weight of the ring after the cotton fiber has burned away. These two will be the first to marry, and each may receive a ring. If they are a boy and a girl some ludicrous prank may be performed, such as pinning a tongue on a wedding bell, blindfolded, or singing a love-song, or composing a poem on "Two Turtle Doves."

Spirits and Spooks

By Anna Nixon

THREE black witches were silhouetted against the white card. That they were about to part was evident, for one had already mounted her broom-stick, the black cat belonging to another arched its back, impatient to be off, and inscribed on the card in fanciful, angular lettering, and apparently issuing from the lips of the third witch was the following:

When shall we three meet again;
In thunder, lightning or in rain?
When Allhallowe'en has come
And the clock strikes seven and one.
Where the place? Up ghostly path
To the house of McGrath.

Thus was each member of a merry party of young people bidden to a Hallowe'en frolic by one of their number.

Allhallowe'en Has Come!

Gaze in the Caldron and Pull Out Your Plum

The house was dimly lighted with Jack-o'-lanterns and candles with witch-cap shades. The guests were received by silent figures clad in garb of witch and goblin.

At various places throughout the house were placards shaped like sign-boards, each one decorated with a witch, black cat, owl or bat, and bearing a direction which read, "This way to the oracle," "Have your fortune told by the oracle," or some similar inscription. After many windings the placards led to the back stairway. About a third of the way up the stairs, which were dimly lighted, was stretched a white curtain, and on it appeared the familiar, sketchy features of the Cheshire cat with its vanishing smile. Each person was permitted to ask three questions of the oracle. To one maiden's timid query as to how soon she would marry came the truly oracular reply, "Plenty soon enough."

A feature which caused much merriment was a variation of the old game, "passing the dollar." The players stood in a circle in a room almost entirely dark. The hostess stood inside the circle with a basket from which she took all sorts of small objects and passed them to one of the company, who in turn started them around the circle. After all the articles had gone around once or twice they were carried away, the lights were turned on, and paper and pencils distributed among the players. The person naming the greatest number of articles correctly was given a prize.

Peanut-shells tied with narrow ribbon were passed, and each was found to contain a piece of apparently blank paper. Humorous predictions for the future were written on the slips with milk, and when held near the fire revealed the absurd prophecies.

Partners for supper were found by matching the parts of appropriate quotations which were concealed in English-walnut shells. Those for the girls were gilded, and those for the young men silvered. Bits of bright ribbon glued to the shell formed a hinge and served to tie the halves together.

Picnic plates decorated with black-cat faces made with India ink were used for serving the refreshments. Peanut butter was used for filling part of the sandwiches, and soft cream cheese to which chopped raisins had been added for the remainder. Individual pumpkin pies made in patty tins, nuts, apples, popcorn and sweet cider were also served; and the crowning feature was a "fortune cake" with ring, thimble and a silver dime baked in it. The person drawing the ring, it was predicted, would be the first of the company to marry; the one getting the thimble must work for a living; and the one who found the dime was destined to become wealthy.

Magic Currents

By G. E. Walsh

TAKE two feet of thin black silk thread and tie a pin on either end. Stick these pins securely in the trouser legs just below the knees. Enter the room, walking with comparatively short steps so as not to break the thread, and ask somebody for a cane. Take a chair with the light at your back, spread your feet apart, and tell the audience to witness the extraordinary electric and magic currents which upset natural law on Allhallowe'en. The lower end of the cane is easily slipped back of the loop of thread, and then as it comes to rest against it you withdraw your hands gradually, making remarks about the slowness of the spirits to establish the electric circuit. The cane wriggles and trembles, but finally balances itself in an almost upright position. No one can see the black thread, and the cane appears to stand upright of its own accord.

Somebody will want to examine the cane in order to discover the deception. Pass it to him, and when it is returned repeat the performance. When somebody gets so inquisitive that he wants to examine your legs, close the performance abruptly by spinning a top in such a way that it glides to the feet of some girl. Quickly rise and blindfold her, and after turning her around three times bid her select a partner for supper among the young men whom you have placed in a circle in front of her.

October Hints

By Joyce Massey

ARE there unsightly, grassless paths around your kitchen door? October is the time to sow them in grass-seed, afterward running over the paths with a roller.

Do you save the bleached leaves of celery? Dried for winter use, these leaves make a savory addition to soups.

Is cider unprocurable for your mincemeat? Try using coffee instead—one pint of strong coffee to one gallon of mincemeat.

Is your kitchen floor cold? Then cover it with old oil-cloth reversed and then painted and varnished. This covering is cheap, easily cleaned and durable.

Do you want green garnishings for your salads in winter? October is the time to sow parsley-seed in a small kitchen window-box.

Are you now using the green peppers in your pickles? Remember that one must cleanse the hands immediately after handling them; sometimes one is seriously burned. If you do forget, sweet milk from the top of the milk-bottle will alleviate the burning pain and restore softness to the injured skin.



The face of her future mate was revealed in the mirror

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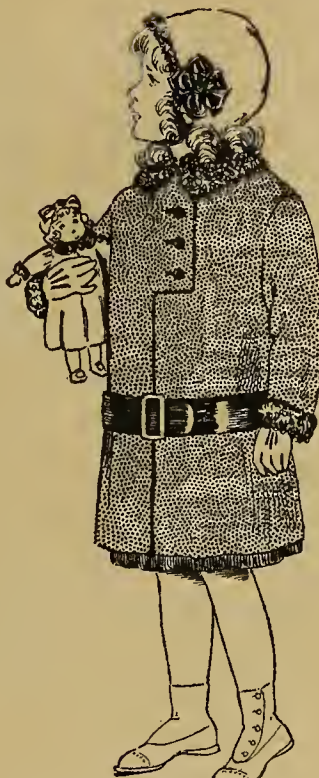
4 to 12 years. Quantity of material required for 8 years, three yards of twenty-seven-inch material, or two and one-fourth yards of thirty-six-inch material, with one-fourth yard for collar and one-half yard of thirty-six-inch material for belt. Price of pattern, ten cents

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No. 2415



No. 2413

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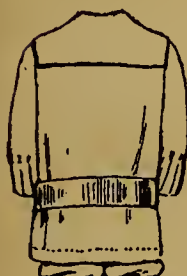
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No. 2417



No. 2413



No. 2415



No. 2414

No. 2414



No. 2417



No. 2338—Empire Negligée in Two Styles

32 to 44 bust. Material for 36-inch bust, four and one-eighth yards of thirty-six-inch material, seven eighths of a yard of twenty-seven-inch material for large collar, or three eighths of a yard of thirty-six-inch material for flat collar and cuffs. Price of pattern, ten cents

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Back view of pattern No. 2338



Modification of No. 2338



No. 2362
No. 2363



No. 2182



No. 2356
No. 2357

No. 2362—Waist with Two Style Sleeves

32 to 44 bust. Pattern, ten cents

No. 2356—Waist with Extreme Side Closing

32 to 40 bust. Pattern, ten cents

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22 to 34 waist. Width of skirt at bottom, in twenty-four-inch waist, two yards. The price of this skirt pattern with tunic is ten cents

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APPLE Butter—Ten quarts of stewed apple sauce, one cupful of good vinegar and eight cupfuls of sugar. Season with cinnamon, cloves and allspice, tied in a bag. This is fine.
E. A. M., New York.

Apple Honey—This is one of the most pleasing fruit preparations, is so easily prepared and is an excellent keeper. Place three pints, or two pounds, of sugar in a saucepan with one pint of hot water. Let boil for about twenty minutes, or until it forms a thick syrup. While syrup is cooking grate or scrape five large mellow apples (do not use peeling, and the finer the flavor of apples, the better the honey will be). When syrup is of the right thickness pour in the scraped apples, and boil just ten minutes. Place in cans, and seal while hot. This makes three pint cans full.
E. D., West Virginia.

Pumpkin Pudding—One pint of pumpkin, one pint of sweet milk, three well-beaten eggs, three fourths of a cupful of sugar, one teaspoonful each of ginger and cinnamon, nutmeg to suit taste and one tablespoonful of flour. Bake two hours, and serve cold with whipped cream.
F. M., California.

A small amount of cold baked beans can be used nicely for sandwiches for children's school lunches, when not enough for anything else, by mashing fine, adding sweet cream, a small dash of vinegar, of pepper and dry mustard to taste and spreading between thin slices of bread, buttering them first. Children are very fond of them.
E. M., Michigan.

Old Feathers as Good as New

By Mrs. A. F. Andre

TO CLEAN white or cream-colored tips and plumes, wash them in soap and warm water in which a teaspoonful of borax has been dissolved. Then rinse thoroughly in cold water, and stroke dry with a clean cloth. Mix half a cupful of raw starch with a pint of cold water, and let the feathers stand in this for about ten minutes. Take out, and squeeze between the folds of a cloth until the water is all out, and then hang up to dry. When quite dry a thorough shaking will cause all of the starch to fly off in a white powder, leaving the feather apparently twice the size it was before.

Colored feathers may be cleaned the same way, but as all dyes are not fast it would be safer to clean them with naphtha. Fill a large-mouthed bottle with the naphtha, put the feathers in, cork tightly, and allow to remain for some hours. Lift them out dripping wet, and cover thoroughly with plaster of Paris, roll together in a clean white cloth, and leave until next day. Shake the plaster out, and the feathers will look like new.

If the cleaned feathers are not sufficiently curly shake them over a hot stove on which is burning salt, being careful to hold them high enough not to be scorched. Or, they can be curled by hand with a blunt knife, each little barb at a time.

To clean osprey, a lather is made of white soap and tepid water. The spray is then taken in the left hand and dipped into the suds, the right hand being used to draw the small feathers down from top to bottom. It is then rinsed in clear water and shaken dry. Colors may fade, but black and white come forth like new. This is the milliner's way of feather-cleaning, and may possibly be of great aid to the economical woman.

How We May Afford Meat in Winter

Can It in the Fall
By Nettie Bell Shedd

THE pork must be baked or the beef boiled the same as for immediate eating, and the back pieces or the shoulders chosen. The shoulders, if cut into, will bake nicely. When thoroughly done and while still hot the meat is easily slipped from the bones in large pieces. In the back cuts there will be a nice roll of solid meat. After the meat has partly cooled cut it in good-sized pieces, and pack the jars as full as possible. Fill to within an inch of the top with the brown liquor from baking or boiling, adding a small quantity of the fat.

Jars with large mouths should be used, as the meat can be packed in larger pieces and better shapes, and will come out better.

If you use Economy jars always use new covers; if the Lightning, use new rubbers, and be sure they are soft and pliable. Put on the rubber and cover, and adjust the top wire, leaving the other loose. With the Economy jars simply put on the covers and clamp them.

Set the cans in a wash-boiler or other large kettle, putting thin sticks under the cans. Fill in between the cans with paper so that they can not touch one another or tip over. Fill the boiler with water about to the neck of the cans, and bring it to a boil. Keep boiling steadily for one hour. Remove it from the stove, but not from the kettle. If you have used Lightning jars snap the lower wire down; if the Economy, simply leave them till cold.

Beefsteak should be chopped as for Hamburg steak, but not made into patties. Fry it in plenty of butter until the juice is all done out, leaving just the butter. Pack it closely in glass jars, pressing the meat down until it is covered with butter, then seal the jars while hot.

Sausage and smoked ham do not need to be put in glass. Slice, fry, and pack them in stone jars. Pour over the meat the fat which fries out, and press the meat down under a weight. When cold cover it to a depth of at least one-half inch, adding fresh lard if necessary, and close the dish tightly.

If care has been taken the meat will be just as nice in six months or a year as when canned.

I would emphasize especially: *never* use an old rubber, no matter how good it seems; it is poor economy.

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The Experience Bazaar

Editorial Note—Here is an open market for the exchange of experiences. Will you not bring your problems and leave them behind? Will you not give and gather the fruits of experience? To give freely and take gratefully is to live wisely.

Serious Questions

DEAR FIRESIDE EDITOR—I have been reading FARM AND FIRESIDE some time, but have not yet found the solution of certain questions I wish to ask. I would like to have those who are in position to answer them wisely do so.

What is It to Support a Family?

How should the financial part of the domestic problem be settled when the husband and wife cannot agree on the subject? What is a proper allowance, or should a wife have an allowance? Who should manage the buying for the house: groceries, children's clothing, etc.? Is a man providing for his family when he requires his wife to account for every cent spent, when he does not do the same? Is it right for a woman to have to ask for money? Isn't a certain amount hers just as much as his? Just because a woman is married to a man must she be a servant for him, without pay? Is it proper for a man to have the property he and his wife acquired together placed in his name alone?

Make a New Tradition

When a woman marries her life is what her husband makes it. If she is his equal (and what man will marry a woman beneath him?) she is his companion and equal in all things. I think she should know all about his financial standing and understand all his dealings. There is no reason why a woman should not know business as well as a man, for if anything should happen to him she should be capable of caring for his interests. Too many women know so little about business and their husband's affairs that they let everyone cheat them when they are placed in a business relation with the world.

Everyone considers them an "easy mark" and tries to get their money.

Consider What a Wife is Worth

Is a woman's life worth only her food and clothing? In every position on earth, except that of a wife, a person is entitled to wages. A wife generally does all that a servant would do, and a great deal more, works more hours a day than a man and goes through ordeals that are almost beyond human endurance, yet many wives do endure this for half a century with only enough to eat and keep them warm, never having an extra dollar to spend. They even have to ask for money to buy postage stamps.

Of course a woman on the farm has a chance to get pin-money by selling chickens, eggs, butter, etc., and I presume the amount she gets more than the necessary grocery money is hers. But what of the woman in town who has no way to earn money unless she works out for it? And the woman who works for others in town is considered a servant and treated as such.

Cast Out Fear

I think a woman should have absolute control of all household affairs. She should watch corners and know how to deal wisely. She should be allowed to manage her house in whatever way seems best to her. She should have enough of an allowance to cover necessary expenses, and a special allowance for her individual needs, and should never have to ask for it.

If she has an interest in her household, and if she is trusted to run her side of the family affairs, what woman would abuse her trust?

Let us hear from others on the subject.
Mrs. B.

The Reply

These questions will touch many a married pair on the raw flesh. The woman who asks them is smarting under a sense of injustice. Has she no right to feel as she does? Is she not right in feeling that when she is placed in a position of inferiority in money affairs she is degraded?

Many women, like many men, are unfit for money responsibility; but I think that women will average better managers than men.

The trouble is that many of us unthinkingly follow old tradition and habit in treating our wives in business matters.

Perhaps my own experience will serve to make my ideas plain. When younger than I now am the matter of an allowance to my wife was a vexing matter. Sometimes I had money from which to give her an allowance, and sometimes

not. I was willing to give it; but my money came in so irregularly I could not give a regular allowance. Finally it occurred to me that the whole thing was silly. My wife would be as careful as I, no matter how much or how little we had. Why dole out an allowance from what was hers as much as mine?

There is only one answer to such a question—for me, at least. I went to my wife and said, "All the money that comes goes into our joint care. You will use what you need, for the family and for yourself. I will use what I need. You will always know what we have in hand, and how much we shall be obliged to raise for debts and other outlay. Please keep track of things for me, and make the money go as far as you can."

We have had no more trouble about the allowance. When we have money in bank her check against it is always as good as mine. She keeps the check-book balanced up, and I always have to ask her how much we have in our account. I think ninety-eight men out of a hundred would find their homes happier and their business more prosperous if they would carry their bank-account in the same way, and, if they do not keep a bank-account, would put the money where both could take from it. One in every hundred has a wife from whose hands money ought to be kept. Another in every hundred ought to keep the money in his wife's hands, and take what she gives him.

Our laws are such that one or the other must have the title to property. But every man should either execute deeds or make a will protecting his wife after his death. His wife should know about this will. Such dealing is the wife's right. And the husband who makes the break to this policy from the old one will find himself much happier, and his wife more a helpmeet than ever.

—Cordially yours, Herbert Quick.

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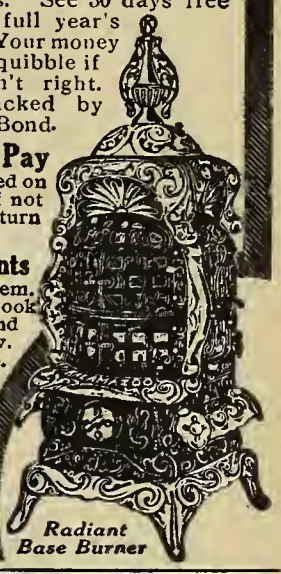
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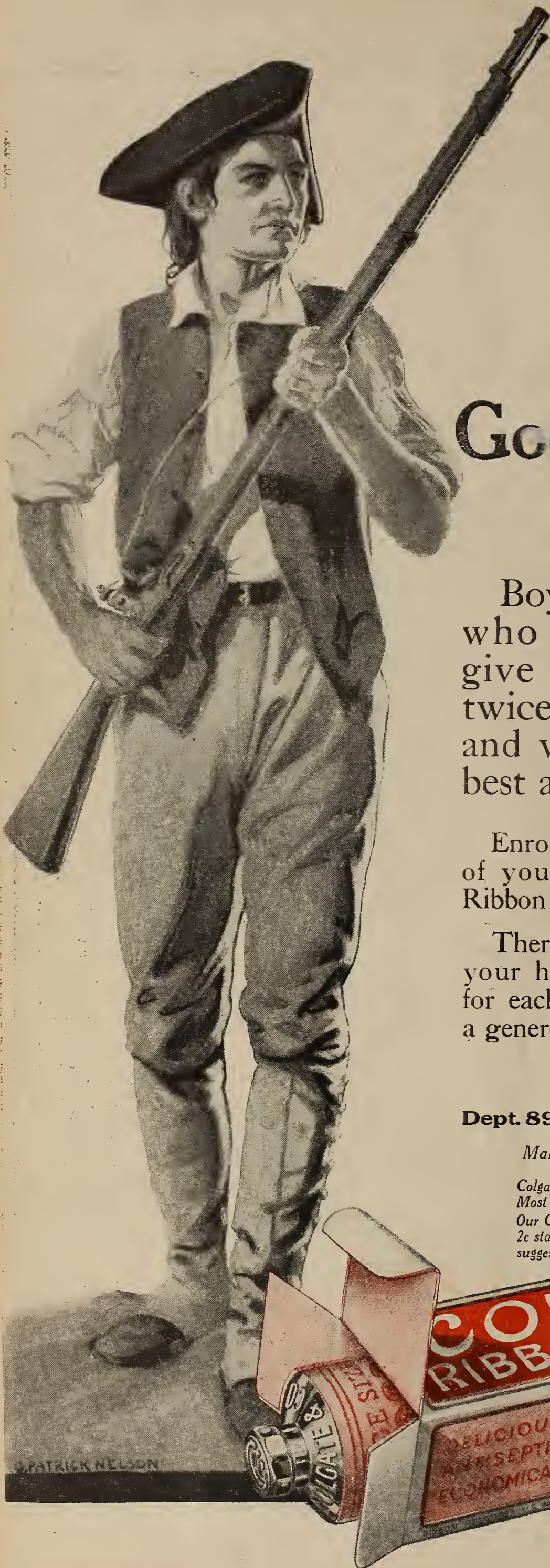
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WITH THE EDITOR

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Why the Round Barn?

John E. Taylor tells of one round barn built in Maine which has proven to be a decided advantage over the rectangular barn for the conditions under which it is supposed to be used. It is cheaper, he says, and more efficient. His story is coming.

When Did You Buy Your Last Shoes?

Was it because the others had worn out or because you had cut the others to pieces? Did the shoes wear out before you thought they should? Did you ask yourself why? As a solution to some of these questions, a contributor to FARM AND FIRESIDE offers some very valuable suggestions.

What About Baby Beef?

Captain Smith, on the Market page, gives his opinion of this much-discussed question, and there will be more on the same subject by other writers of experience. An Indiana cattle-feeder recently made the statement that he saw no reason why there should not be just as much money in beef cattle this year for the farmer who feeds judiciously as there has ever been, and he expects to test this out by feeding some cattle on his own farm. It is certain that as long as there is money in the feeding of beef cattle, beef cattle will be fed.

Do You Raise Honey?

The production of honey is frequently not a side line; but whether it is a side line or a main line crop for the farmer, it should be sold profitably. But how? is the question. Only someone who has met the market conditions and received top-notch prices can tell much about it. Just ask a writer is K. E. Hawkins, for whose articles you may well look.

Using the Stumps

Is it possible to conceive of any new method of pulling stumps? Probably not, but a new application of an old system will be given in a brief article.

The Farm We Would Like to Have

That is what person after person has written us about. City people who want to get a farm wrote, stating their ambitions; some people on farms wrote, telling why they had or had not made the successes they expected to make after leaving the city. It is a big question, and will be treated from many angles.

The Fatted Calf

On Thanksgiving we must overeat. There will be many suggestions as to how to do it.

Drafts and Drafts :

Each Thanksgiving we must scatter our money in the markets, lavishly, happily, but we need not send it smoking uselessly up the flue of the kitchen range. Mrs. Talbot will tell us how to govern our drafts in the oven so as to reduce our drafts on the bank.

The Marriage

This is the season of needles and scissors, and it is a season when Ingenuity must stand up and marry Love with Economy. FARM AND FIRESIDE represents Ingenuity, and will unite them in a joyous bond. Everybody is urged to pick up her work-basket and glue-pot and be present.

The Organ and the Hurdy-Gurdy

There is a Voice raised against the secularizing and cheapening of our Sunday-school festivals. The Voice recites some of the twaddle which too often is presented as a religious offering, and then by contrast takes up the measure of the great hymns of the ages. No reverent ear will be in doubt as to the lesson read.

Who is He?

Out from the unfathomed distance swings "The Old Man from Nowhere." His acquaintance is worth making.

A Name for Every Farm

When it came to naming our farm we were embarrassed by the fact that the most common names—the ones suggested by natural conditions—seemed to have been used up, and we wanted one which would be at the same time agreeable and distinctive. A farm is entitled to a name which goes naturally with it. And it must be a word which will not trouble the tongue, or a nickname will take its place.

Some people who had bought an "abandoned" farm in New England were seeking a name, when they were visited by a friend who, on entering the door, looked about at the huge combined living-room and hall and exclaimed, "Well, this seems to be mostly hall!"

On the analogy of "Bracebridge Hall," "Westminster Hall," and the like, the owner seized upon the punning speech and called his farm "Mostly Hall." Dr. Cyril G. Hopkins took up a place in southern Illinois which from its run-out and depleted character was called "Poorland Farm." He accepted the name as a permanent thing and a challenge to his principles of a permanent system of agriculture.

There are thousands of "Fairviews," "Hillcrests," "Willow Brooks," "Green Hills," "Blue Hills," "Sunny Slopes," and the like—and very good names they are too. My friends the Browns out in South Dakota made up the very elegant name "Laverta" from syllables of the first names in the family, and in recognition of the broad meadows of their farm they called it "Laverta Meadows."

"Sevenoaks" is a name which is not only illustrious in literature, but seems naturally to belong to farms blessed with that number of oaks. Joe Wing's farm is called "Woodland Farm." I bought a ram of him recently—a pure-bred Dorset—whose certificate reads "Woodland 613." A good farm name is a good name to give to pure-bred animals originating on it.

As I just remarked, however, we wanted something different. We have a grove of hard woods, mostly oaks, and we thought of "Oakshaw," because a shaw is a shady place, a thicket, a small grove. A good name too, I still think.

A dozen names were canvassed, and finally we decided on "Coolfont." The reasons are very simple. The valley in which we located is plentifully supplied with cold, running springs. They burst out of the hills on both sides, and running down in dozens of little "becks" (as they call a spring run in some parts of England) they form a strong brook, which runs into the Potomac three or four miles north. Our house-site was chosen for two or three reasons. One is that there had been a house on the spot since 1756 until we tore the ruins down. There were lilacs and other trees and shrubs growing, and the atmosphere of inhabitancy which comes from the presence of generations of human beings. Moreover, there still stood some giant trees which we could get nowhere else, save by waiting a thousand years or so, and we didn't feel that we could spare the time. And there was a cluster of cold springs, bubbling out at the feet of these trees.

The springs are really cold—temperature fifty-three degrees, winter and summer, generation unto generation. When Casler, a British soldier and a fugitive from Braddock's defeat, came to the spring in 1756, it was running just as it runs now—a hundred gallons or so a minute, temperature fifty-three degrees. When Columbus discovered America, it was just the same, and the big oak stood there just as it stands now. And long after the oak has died of old age—and it looks good for five hundred years yet—that spring will still run—a hundred gallons a minute, temperature fifty-three degrees!

We had a dreadful drought this summer. All about us wells failed, brooks dried up, and the Potomac itself shrank, and shrank, and shrank. But we could see no difference in the spring. In fact, there are so many such springs in our valley that our brook all through August ran as clear and strong as ever. It seemed to say to the Potomac, "These other so-called 'affluents' may dry up and fail you, but I'm doing my duty. As long as old Great Cacapon Mountain has waters in his heart, I'll bring them to you. You just tell those drought-stricken hollows below that Sir John's Run never quits, winter or summer, year in and year out, century after century! Never!"

And it never does quit. I felt like taking my hat off to the brook, and I did actually take it off at the spring—often, of a hot day. But to get back to the name. A spring is the same thing as a fountain. To be sure, we are apt to think of an artificial basin with a playing stream to fill it, when the word is used; but, as a matter of fact, a fountain is a natural source of water, and is the same as a spring. A spring, a fountain, a fount, a font and a well are all the same thing, away back in the language. We thought of "Cold Spring Farm," but we knew that there must be dozens of those. "Coldwell" gave us a hint as to the origin of the name Caldwell—but it didn't suit the farm. Somebody suggested "Beckholt," from "beck," a rivulet, and "holt," a grove, an orchard. But this seemed a little flossy for common folks—and at last we decided on "Coolfont," because, while everybody may not realize the fact, that name will always describe the farm exactly.

The cellar floor will be some feet above the upper spring—we haven't built yet, though our orchard is several years old, and our barn and cannery make the place look quite inhabited. By digging downward and outward from the end of the cellar we can intercept this spring-water and carry it through a spring-house reached by steps from the cellar. This spring-house will be of stone, and right under the old oak, where it will be always in the shade. We haven't determined on the dimensions, nor the plan of this spring-house. In fact, we have had no experience with spring-houses, having lived out in Iowa and Nebraska where they are not common. Won't some of our friends who have ideas on the spring-house question write in and tell me how big to make it, and how to plan it? I'll be ever so much obliged.

Plans for the Spring-House

The Name We Decided On

The Name We Decided On

The Name We Decided On

The Name We Decided On

The Name We Decided On

Robert L. Smith

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PUBLISHED BY
THE CROWELL PUBLISHING COMPANY
SPRINGFIELD, OHIO
Branch Offices: 381 Fourth Avenue, New York City; Tribune Building, Chicago, Illinois
Copyright, 1913, by The Crowell Publishing Company
Entered at the Post-Office at Springfield, Ohio, as Second-Class Mail Matter

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One Year (26 numbers) 50 cents
Canadian, 1 Year . . . 75 cents
Single Copies, Each . . . 5 cents

Subscriptions and all editorial letters should be sent to the offices at Springfield, Ohio, and letters for the Editor should be marked "Editor."

Silver, when sent through the mails, should be carefully wrapped in cloth or strong paper so as not to wear a hole through the envelope.

Vol. XXXVII. No. 3

Springfield, Ohio, November 8, 1913

PUBLISHED
BI-WEEKLY

The Fatal Defect!

MR. GUY SWAN, a Michigan reader, thinks our plan of solving the dog problem has a fatal defect. It lies in the appealing, fluffy, wabbly, helpless, innocent, destructive, companionableness of the infant dog. Says Mr. Swan:

You ask us to tell you what is the matter with your way of solving the dog problem.

I think you overlook one of the most fundamental instincts of human beings. The instinct to love the young. We have three dogs. One is a female. She is a curly, long-haired, snow-white French poodle. Twice a year she presents us with a litter of puppies.

Now I do not love those puppies before they are born, but the instant I see them I love them, and were it not for the penalties to follow I would sooner kill the dog-warden than to kill a puppy. I never do kill them. I give them to my neighbor's children, who love and care for them.

As long as the instinct to love little puppy-dogs remains in the human breast, those people who are annoyed by the existence of dogs will continue to suffer.

This is one of the sentiments we inherit from the ages when the dog cheered the dark caves in which our ancestors lived, amused the family fleas while the people slept, barked at the approach of danger—or anything else—and worked himself into the fiber of the human heart. But the plan of making it hard and expensive to get a new dog will ultimately prevail even against this sort of maternal instinct of men for puppies. Mr. Swan's mother poodle will some time pass away. If it is easy and cheap he may succumb to the seductions of another—but if we watch him and make it hard for him to get another she may never have a successor. And thus the canine supply will be shut off at its source.

Curing Consumption

THE world is making some progress in the fight against tuberculosis. Especially in homes for consumptives and tuberculosis hospitals has progress been rapid. In other words, where the doctors can control the conditions they can cure a large percentage of cases.

In Prussia, for instance, the patients who die in these institutions amount to only a little more than a third as many per thousand as sixteen years ago. It was then thirty-one as against twelve now. The mortality in the cities of Germany has fallen off nearly one fifth in five years. This seems to be real progress.

What Does This Mean?

IN THE month of June there came to our shores 176,261 immigrants. The largest influx in any one month prior to this was in May, 1907, when we received incomers to the number of 183,886. During the last fiscal year there came to us immigrants to the number of 1,197,892, or only 8.4 per cent. less than the influx of the record year, 1907. In other words, although the country has been filling up rapidly for a hundred years, immigration from foreign peoples is at flood-tide now.

Some say that this means that times must be good here. We may judge of this by putting ourselves in the place of a person about to emigrate. He will not come unless conditions are better here than in his own land. In fact, they must be a great deal better if he makes the great venture of migration. Times might be anything but what we should call good here, but if they were a great deal worse abroad people would still come if they were permitted and could raise the passage-money. The lack of immigration from Germany, France, Great Britain, Ireland and the Scandinavian countries, which used to be so enormous, is accounted for by the fact that times

have for a long time been as good for the immigrant class in those countries as here. We should no doubt soon have an enormous immigration from Russia, not only of the Jews and German Mennonites, who have furnished most of our Russian immigration hitherto, but of the Russian moujiks or peasants, were it not for the fact that these people are so benighted as not to know much about America, so poor as to be unable to raise the passage-money and so oppressed as to be denied the right of expatriation. Thus we get our influx from those midway between the prosperous Germans, French and British, and the submerged Russians.

The enormous incoming tide of those peoples is a problem, the meaning of which history will have to make plain.

Ruralize the Rural School

LH. BAILEY speaks of "instruction by means of agriculture." It is a fine phrase. Instruct in reading, writing, arithmetic, morals, geography, physiology, manual training, business—all by means of agriculture. Instruct in high thinking, in the application of means to ends, in the pursuit of results by scientific means, in acquiring scientific training by practical means, in the use of pure and classical English, in that integrity of mind and thought which leads



You can see a dozen differences between these two cows; but there is really only one difference. The difference is in their blood. They are the same age. They have had the same chance. They have different ancestors, that is all. One has cost as much to raise as the other. But the Shorthorn is worth \$100 even without a pedigree, and the scrub is worth—well, what is a hide worth now? That's all.

to poetry, art and the humanities—instruct in all these by means of agriculture. They are all in agriculture, and they will all be in that "new kind of rural school" which we shall have when everything done in the school shall be correlated with rural life. Everything can be taught "by means of agriculture."

The sight of a man raking up great heaps of autumn leaves and burning them is a sad one to the person who likes to see valuable things saved. The place for the leaves after they are raked up is in the compost-heap or scratching-shed. Let them be mixed with turf, poultry-droppings and other waste stuff and composted for use as food for the garden plants or flowers. They are worth saving.

Where's the Fool-Killer?

MR. FRED BRITTEN is from Chicago. It is too much to expect that the city which has sent McDermott and Lorimer to the National Congress at Washington should distinguish itself by its representation there; and Mr. Britten, who is in the lower house, is running true to Chicago form. He seems to lack the brains of Lorimer, and to possess all the stupendous poverty of ability which has distinguished McDermott. Mr. Britten's contribution to the literature of legislative lunacy is a bill for increasing the beef-supply by prohibiting the shipment for slaughter of cattle under two years of age. Of course the bill will not pass. If it did it would cause an upheaval never seen in this country since the farmers gathered at Lexington and Concord.

How does it happen that a person capable of getting into Congress, even from Chicago, has not been told in words of one syllable that the beef which is produced cheapest is that butchered under two years of age? Mr. Britten would scarcely be expected to understand that the cheap production of beef is a condition precedent to its cheap sale; but the rest of our national lawmakers will see the point. Corn is now so high that it can't be sold in the form of beef at the prices now prevailing. When we keep all our calves, as Mr. Britten believes he thinks we should, to an age past two, we shall have to feed corn—and corn will go higher; unless Mr. Britten has a law passed forbidding the shipment of corn except for the feeding of cattle under two years of age.

The whole thing is probably an outburst of jealousy on Mr. Britten's part. He hates to have calves' brains served in the Washington cafés in his presence. The knowledge that there is more intelligence on the table than over it disquiets him, no doubt.

Wanted, Five Melting-Pots

THE need of the Balkan States is melting-pots—five melting-pots, to be exact. The world knows that the new lines which have been drawn as the limits of Bulgaria, Serbia, Roumania, Greece and Montenegro cannot be satisfactory. The trouble is that all the Serbs are not in Serbia, not much more than half the Bulgars are in Bulgaria, Roumania spreads over a great deal of territory which is inhabited by people who are not Roumanians, Greeks are located all through the lands of the other nations, and millions live in Greece who are not Greeks. Montenegro takes in those who are not Montenegrins with every acre of land she acquires; but she can never hope to get all Montenegrins under her flag, no matter how much she grows. The trouble lies in the manner in which these various races are scattered about all over southeastern Europe. No such thing as satisfactory national lines is possible.

Must they always war against each other, then, neighbor hating neighbor? Unless they succeed in melting these people together they will always live in bitterness and turmoil.

The melting-pot of America is the public school. The right sort of public school would fuse the warring peoples of the Balkans in a generation or so, just as it has fused the "Orange" Irish, the Catholic Irish and similar breeds of ancient enemies in America. We need a new kind of public school in this country to melt up and fuse the new classes which are forming in America.

No neighborhood which sends its children to school for the purpose of studying all together the things in which all are equally and vitally interested—things that relate to making a living—can long remain divided in matters racial, political, social or financial.

When Good Farmers Get Together

A Farmers' Club for Farmers' Needs

By W. A. Toole

I WANT to tell you about our Farmers' Club. The club territory starts at the city limits of Baraboo, Sauk County, Wisconsin, and runs out about four miles south, southwest and west from town. It is a neighborhood of average-sized farms, ranging from forty to two hundred acres in size. The circumstances at the time the club was formed were briefly these:

There was no neighborhood church, and we lived so near town, with good roads most of the year, that those with church-going tendencies attended the church of their choice and naturally formed friendships among the church membership.

Others had friends or relatives in the city which provided a place to visit whenever need of social intercourse was felt. As a consequence many of us hardly knew some of our near neighbors. The conditions were, in this respect, much as they are in a large city. I became somewhat acquainted with some of my neighbors when exchanging help at thrashing, but many of the women did not get acquainted at all.

This condition of affairs did not seem right, so after talking things over a number of our neighbors met with us and organized the Skillet Creek Farmers' Club, taking the name from a little stream that drains a part of the territory of the club.

A simple constitution was adopted, which, with some modifications, has since been sent out by the Wisconsin State University Extension Division as a model for other farmers' clubs.

As given in the constitution: "The objects of this club are to promote sociability and prosperity among its members. Any person is eligible to membership who is old enough to be interested in, or young enough to enjoy, the meetings, on payment of an annual fee of ten cents."

Benefits the Club Has Brought

During the winter-time, beginning with the first meeting in November, meetings are held on Friday evenings every two weeks. The plan is to start as nearly as possible at eight o'clock, opening with music, roll-call, minutes of preceding meeting, followed by a talk or paper, by some member of the club or invited guest, which those present are privileged to discuss at its close. After this more music is given, sometimes vocal, sometimes instrumental, and occasionally by phonograph.

What is generally known as a "recess" follows, but in the case of the Skillet Creek Farmers' Club this was happily called a visiting intermission, and this visiting intermission is one of the strong factors in the success of the club.

If possible the second period is opened with music, followed by the remainder of the program, which is usually of shorter duration than the first part.

Annual features during the winter are: the corn

show: the annual patriotic meeting the latter part of February, at which the pupils of the three districts which contribute to the territory of the club entertain with various patriotic exercises, and the winter festival, which is a dinner and day of visiting at the home of one of the members. Under the direction of a committee, different families contribute a certain amount of prepared refreshments so that the festival is not an undue hardship at the home where it is held.

The club has been a factor in co-operative efforts, promoting many lines of public improvements, such as permanent highways, county fairs and local telephones.

The greatest value has been in bringing about better social relations. The co-operative work for common good, such as better roads and other improvements,

Brain-power the master, muscle-power the servant

has served to sustain interest in the organization and gives a reason for its existence, as well as to point out to us the many qualities which we did not know our neighbors possessed.

When the spirit of organization once starts in a neighborhood there is no knowing where it will stop. Since the Farmers' Club was started there have been organized a Bachelors' Club and a Young Ladies' Club.

Round Table Talks

By Harrison Lowater

WE CALL the farmers' club of our community in western Wisconsin the "Round Table." The meetings are of informal nature, though various committees conduct certain parts of the club's work along systematic business lines. The principal activities of the club are devoted to the social, intellectual and financial betterment of the people. The young people have a department of their own which has kept

many young minds from dreaming of the city. The "Round Table" meets in small units at different houses and as a whole at the school-

The head draws the highest wages and is the home of a product the most in demand

Life is a game of "Pussy want a corner." Work alone will not keep one from the center

house. The program of a meeting includes speaking, music and exhibits of farm products and home handicraft. As an example of one of our Round Table talks, we may take the following remarks of one of our members:

"As my neighbors have been talking, I have been imagining myself a reviewing officer reviewing my old acquaintances as they marched by. While other classes of people at first filled every position, I noticed the farmer appeared more often as the company passed.

"The best drilled in keeping step or in their maneuvers was a platoon of student farmers of different ages

who by study, observation, investigation and a successful use of others' experiences had met with success.

"There were several banners, but the last ones were the ones I remembered." (The mottoes given on this page.)

The next remarks are those of one of the ladies: "The by-product work regulated by our several committees should help to keep the girls on the farm. My three girls have each earned several dollars from aiding different committees, and to-day they couldn't tell of one hour missed from school or proper amusement.

"How to keep the girls on the farm is as much of a question as how to keep the boys.

"My answer is: educate them in the science of farming, and then educate society that women may take an equal part with men in managing farms or branches of the work on the farm.

"To-day the women on many farms have but little to say outside of household matters. They do not have a pocketbook of their own. Nor is this condition confined to farm households.

"Everybody acknowledges the necessity of suitable training of the male portion of humanity for any position he is to occupy. The State even steps in and helps pay the bill. Outside of teaching and office work, but few girls are trained for a life's work; they must live, so we find them seeking positions in the city. They go to the work for which they are or can be trained. It is the country girls, in a large measure, that become the work women employed in silk mills, knitting mills, factories, stores and servants' positions. Many of these recruits have brains that should be at work solving farm problems.

"Now, what is the remedy?

"First, destroy the many influences that to-day are directly and indirectly teaching all country girls that a life on the farm is one of overwork and poverty."

Educate the Girls as Well as the Boys

"Second, educate the public in the idea that physique is not a large question in farm management. The lack of muscle may be a handicap, but it is a small one and is easily overcome by trained brain-power. The knowledge of 'how to do' scientifically will always be supported by a

'way to do.'

"There are lines of farming I can look after and push just as well as any man. Any woman can meet with success on the farm

if she is interested, knows what to do and has faith in that knowledge.

"But society must be educated so the young woman of to-day will not lose caste by being on the farm. Social standing will outweigh everything else. Education is the key to hold the girls."

The business session of the meeting includes such reports and discussions as these:

"As your committee to report on business committees for the coming year, I find we need the same rules, payments and credits as were enforced last year. Our committees are as follows: [CONCLUDED ON PAGE 12]

Homeseekers' Insanity The Viewpoint of an Ohio Farmer Who Has Met Many Men of Other States

THEY say that a man needs a hundred eyes when he buys a horse, but if that is true he surely needs a thousand when he buys a farm. Unless you have had experience you will be the center of thought for two or three real-estate dealers as soon as it is found that you are in the farm-market.

We think that one piece of advice to any man who is not acquainted with a country and goes into it to look the thing over is to not take any money along, nor have any at home that he can draw on. If he is from a country where the usual price of land is around one hundred dollars to one hundred and fifty dollars an acre he will be pretty likely to want to buy when he gets in any other region, provided he is suited at all, where land can be bought from ten dollars to twenty-five dollars an acre. The proposition looks so cheap and sure that he objects to waiting long enough to give the other fellow a chance at the bargain, when, as is generally the truth, he has been told wonderful tales of the country by a smooth farm dealer and is off in his judgment, temporarily. Other land joining what he is looking at can in most cases be bought at from five dollars to ten dollars less than what he thinks is cheap. The real-estate man will get the difference.

A hustling farm man will spot a newcomer in his town as soon as he sees him, and if at all possible will hold him where he can talk and take him around to the places where he has lands to dispose of or trade. If possible he will have the land-looker stay at his house while in the new country.

One deal that we were interested in shows some of the different ways adopted by a ring of farm dealers. There were four of them, and they were supposed to

be reputable business men. They got Brown, who was a northern land-looker, well satisfied with a 240-acre farm, and finally, before he started back North, had him sign to a down payment of \$100 on this place. Then one of the members of this firm attracted Brown's attention to another place at a lower price. Brown liked the latter one better and wanted to get off from the first deal. But the \$100 was signed down, and he went back home. One of the firm's members followed him back to another State for no other purpose than to get the money so he could take it home with him. The only reason why they did not get him to sign down for both of the places was because he would not. They wanted money, not farm sales.

Doctoring a Farm for Demonstration Purposes

Another way that shrewd dealers have of lauding their men who are skeptical as to the producing qualities of the soil is to have their own farm out somewhere near town, handy to get at and pretty well fixed as to buildings, though not generally specially attractive. "This place is a sort of sample," they say. "Now here, see what this has produced, here is a corn-field that went sixty bushels per acre, this tobacco is worth about eighty dollars to one hundred dollars per acre, this cow-pea field will make at least twenty bushels to the acre," and so on. Generally the facts are told all right, because most humans can see what a crop is and do not take anybody's word for it. But the point is that this place where the big yields are made is not a sample. Fertilizer is used heavily on all of these places, so much that it would be utterly impossible to make such yields for the regular farmer

without making his fertilizer bills as big as the crop could ever bring were it sold at the highest prices. And here again it is like the horse deal, the farm is doctored. The dealer does not expect that such crops can be made as he makes them and do it at a profit; he is doing it as a part of his business.

As far as the real South is concerned, we are not much acquainted with conditions there, but in the Middle South, as Tennessee, Arkansas and northern Virginia, we know these things to be absolutely true. Men are there to get the northern man's money, and they are onto the job. They know that it is to their great advantage to get a deal started before the buyer starts back to the North, or they will lose their best chance. It seems to me that when we Northerners get into this land of sunshine and green vegetation, after coming away from a snow-covered country, where everything looks so desolate and lonely, we get a sort of temporary insanity and do things in the land-dealing line that we would never think of doing were we at home under normal conditions. We see the land there, we see the crops and see that real folks live there and some of them get along well financially, and it is no wonder possibly that we are upset in judgment about land values. We can't stand it to let a suitable farm run the risk of getting into some other fellow's hands. It is this feeling that is the real-estate man's cloak.

It must not be inferred that all southern land is bad, will not raise crops or at least cannot be restored even if it is badly run down or depleted in natural fertility. But it is true that the average northern man is not able to judge southern values with merely the knowledge he has of his own part of the country.

Dairying by the Square Mile

Jersey Cows Now Pasture on Forty Thousand Acres Where Coyotes Used to Roam

By W. D. Hornaday



Mr. Lasater

THOUGH not known to many people even in Texas, the largest dairy herd of cattle in the South, and perhaps the largest in the United States, is situated near Falfurrias, Texas. It consists of 2,300 Jerseys, all of them either high-grade or registered animals.

The dairy business is usually associated with thickly populated communities and sections. One would hardly expect to find in the chaparral-covered, sparsely settled ranch region of south Texas a dairy of the size which is in operation there. It is owned by Ed Lasater, who went into that remote part of the State about eighteen years ago and purchased a tract of 300,000 acres of wild land which he has converted into one of the most modern ranches in Texas.

His ranch and dairy farm is located thirty miles inland from the Gulf of Mexico and ninety miles north of the Rio Grande. At the time he settled there the ranch headquarters were thirty-six miles from the nearest railroad. Through his efforts a line of railroad was constructed across this intervening distance, and as a result of the establishment of this transportation outlet the present thriving town of Falfurrias was laid out and wonderful agricultural development has taken place in that region.

It was in the fall of 1909 that Mr. Lasater began to build up his present dairy herd. It was a new industry for Texas, and many people who were aware of his plans took a pessimistic view of their probable outcome. In the first place, old-time cattlemen told him that registered imported Jersey cattle such as he had purchased for his dairy herd could not stand that climate, and that they would die of splenic fever. Mr. Lasater laid off 40,000 acres for his dairy herd, and, after freeing seven hundred acres of pasture-land of the ticks which cause the fever, he placed his imported stock in that pasture. The balance of the Jerseys must necessarily have ticks on them to become immune when young, as no other kind could be marketed in the South. He has sustained no loss whatever by reason of splenic fever. This is a matter of much significance to breeders both above and below the quarantine line.

Experiments in Economical Feeding

Mr. Lasater's dairy herd is divided into eight groups, each of which is operated separately and a record kept of the milk and butter production of each animal in order that they may be properly graded. The chief reason, however, for dividing the herd into this number of units is that ample pasturage may be provided for all the cows. Each unit has separate pastures for cows in milk and for dry cows. Three of the pastures are operated exclusively with registered animals, and the other five with high-grade cows. The average daily milk production per cow is approximately nineteen pounds, and the daily production of butter per cow a fraction over a pound.

Mr. Lasater has also experimented extensively with different feed products with a view of obtaining the best results in milk and butter production. He obtains the best results by feeding a ration of six pounds of cold-pressed cottonseed-cake per cow per day, at a cost of less than six cents, including native pasturage. This amount of cake equals three and one-half pounds of choice export cake. In that far southern part of Texas the winters are mild, and grass can be usually counted upon nearly the entire year. The weed crop is also profuse, beginning early

in February. The cows thrive on this pasturage, and are carried through the summer on grass in fine condition. Even a dry season has no terrors for him because he also puts the thorny cactus, or native prickly pear, as it is commonly called, to practical use. This plant is indigenous to that part of Texas, and ranch lands are usually covered with a thick growth of it. It has long been known by stockmen that cattle have a special liking for the juicy, nutritious pads of the prickly pear, but owing to the multitudinous thorns that cover the product they and other live stock are unable to eat it in its natural state. Mr. Lasater conducted a series of experiments on the fattening and nutritious properties of the prickly pear a few years ago. He kept a force of Mexicans employed burning off the spines.

Abundant Forage and Cheap Labor Make Expenses Low

The plants were then cut and fed to the cattle. Excellent results were obtained, which led him to begin planting the cactus on an extensive scale. He now has about six hundred acres devoted to growing the plants, and from them an enormous annual tonnage of forage is obtained. This product gives a very large yield. Where proper attention is given to its cultivation, about twenty-five tons are obtained from an acre in a year. During November, December, January and sometimes the early part of February he feeds his dairy cows these prickly-pear pads. The spines are burned from them by means of a gas-generating machine, and the cows eat the cactus as it stands in the field. While spineless cactus is often found growing wild in protected spots in the ranch region it is not found practicable to attempt to grow this variety for stock-feeding purposes. The cost of burning the spines off of the plants is so nominal and the yield so abundant that the native thorny variety promises to become a very important and profitable forage crop in a wide, broad scope of border territory of Texas.

Supplemental to the prickly-pear forage the cows are provided with silage. Mr. Lasater believes in silos. He already has erected twenty-one silos and is preparing to build twenty-one more. Those now in operation have an aggregate capacity of 2,600 tons of ensilage. They are filled with corn, Kafir-corn, sorghum and pea-vines.

The milk from each of the units of the dairy is hauled to the nearest of the two central separating stations and skimmed. The skim-milk is fed to the calves and hogs, and the cream taken to the large creamery operated in Falfurrias and manufactured into butter, which is marketed in all of the large cities of Texas.

Besides his large dairy herd Mr. Lasater has upon his ranch about 20,000 stock cattle, seven hundred horses, a large flock of sheep and many hogs.

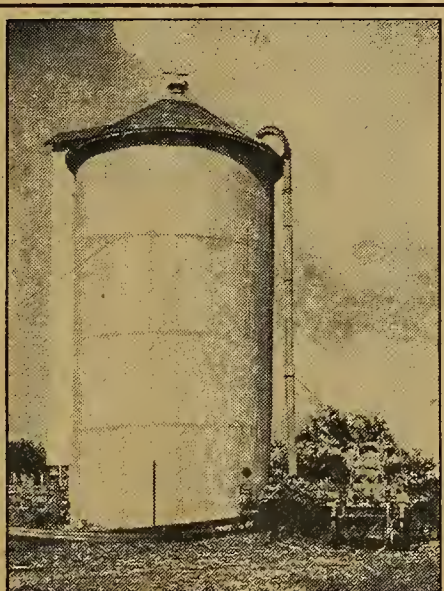
The water-supply of the ranch and dairy farm is abundant. The property is watered by more than one hundred wells, which are so located that no part of the land is more than two miles from a watering-place.

A veritable oasis has been built up in what was until a few years ago an undeveloped and little-known ranch region. Many industrial enterprises have been established not only in the town of Falfurrias, but in adjacent territory. Comfortable homes have been provided for hundreds of people, and the spirit of progress is to be seen on every hand.

Owing to the abundance of cheap Mexican labor, Mr. Lasater is able to operate his dairy and ranch at much less expense than is usually encountered in such enterprises. This condition also applies to other character of business all through the border territory where the Mexican population is large. Their living expenses are usually low.



Imported Jerseys eating cactus-pads. They do not seem to consider them as a "come down" in their standard of living



Filling one of the twenty-one silos



Harvesting a forage crop for the dairy herd. Most of the farm "hands" are Mexicans

A Preacher Studies Farm Finances—By A. R. Finley

OUR community is in northeastern Illinois. It is composed of about seventy-five grain farmers and twenty-five dairy farmers. From my observation it is about an average community. Our land is not the best in Illinois, but produces a good average crop of oats and corn, and above the average crop of hay.

Almost every farmer has kept chickens from the time he began the business. Very few have kept an accurate account of the cost or of the profit of their flock, but each family in the community has an average of two hundred hens. The average hen lays about seventy-eight eggs a year. This would be 1,300 dozen a year for each family. Most farmers market their eggs at the local market, and prices are as good as can be expected when eggs are cared for as they are by the producer and are sent to the commission market in the city. We ought to think more about caring for the eggs than we have. By careful gathering and grading, eggs, if shipped direct to the dealer in the city, would bring at least two cents a dozen above the local market price. At this figure each family would save \$26. Most farmers get no eggs in December, January and February. It would take but little care to get hens to lay twelve eggs each during this time. The local market will pay thirty-five cents a dozen for them. This will increase the egg income \$70 a flock.

The average farm sells 250 pounds of poultry a year. This could be sent direct to the city retailer and a profit of two cents a pound realized, making another \$5 increase in the poultry profits of the family flock.

More Home-Raised Feed Would Reduce Expenses

Taking up the dairy industry, let us consider the loss here. I went into one of the dairy barns of our community and found the purchased feed was costing nine cents a day a cow, or \$32.85 a year. It takes two acres of corn producing forty-one bushels an acre at forty cents a bushel to pay for this amount of feed. Two thirds of an acre of alfalfa will produce the same amount of milk-producing feed. There would be left one and one-third acres of land for corn, which at the above rate would produce fifty-four bushels of corn worth \$21.60. This amount could be saved on each cow, a saving of \$324 on this farm of fifteen cows.

Another loss to the dairyman comes when he does not test his cows. Records from the experiment station show that one fourth of the cows in Illinois do not make any profit. If the farmer kept forty cows and ten made a profit of \$30 a year each, twenty a profit of \$15 each year, and ten simply paid for their feed, the whole herd would only average a profit of \$15 each a year.

The dairymen of our community could get larger profits by shipping cream instead of milk. Milk testing 3.6 fat is worth about \$1.20 a can on track at our

This was written by a country preacher. It shows that he is also a thinking business man. There may be some flaws in his deductions, but they are not as large as the holes he has pointed out in the farming system of his locality.—EDITOR.

station. Selling cream testing .25 would bring two and one-half cents a gallon more. This would give an increase of \$17.07 a cow a year if the cow gives twenty-four pounds a day for six winter months and thirteen pounds a day for the six summer months. The saving on a herd would be \$256.05. The cost of hauling would also be reduced, which at twenty-five cents an hour saved, and one hour a day, six days a week, would

amount to \$78 a year for each dairyman. This is a saving of \$334.05 for a dairy farm of fifteen cows.

Considering the possibilities in better crop production, I find that our farmers aim to gather seed-corn before frost, but they do not use the best methods for drying, and very few, if any, test their seed before planting. This year some fields were planted the second time as late as June 6th as a result of improper seed-selection. One bad ear in fifteen will make a loss of three bushels an acre. On an average of fifty acres to a farm this would be one hundred and fifty bushels, and at forty cents a bushel would make \$60 a family.

Chances for Saving in the Home

Believing that by a little co-operation the farmers in our community could save in the groceries and other things which they must purchase, I began inquiring to find some farmer who kept an accurate account of the living expenses. I was unable to find one who could give me anything definite. Having kept an expense-account in our own home, I turned to that because I found nothing nearer the average. Our expense-account is not as large as that on the average farm, for our family consists of myself and wife, and we do not consume as much food as the average man and wife. We use practically no meat, no canned goods, and but very little of the package breakfast-foods.

We have our own garden and chickens. We purchase no eggs. We can, from our own garden, all the peas, beans, pumpkin, squash, pickles, spinach, tomatoes, corn, rhubarb and asparagus we use. The other living expenses for the year, at the local retail prices, would have cost us \$107.30. On account of our small salary we economize as much as possible. We purchased our goods in large quantities from the mail-order houses and at retail in the city. In this way our goods cost us \$86 for the year, a saving of \$21.30, or twenty per cent. This would be a saving of \$53.25 for the average family of five. Adding to this the saving on meat, flour and package foods, the amount would be increased.

The average family will consume about two pounds of meat a day. At a saving of three cents a pound, which can be saved by co-operation in buying, each family would save \$21.90 a year. I have been unable to find [CONCLUDED ON PAGE 15]

WORKS ALL DAY

And Studies at Night on Grape-Nuts Food

Some of the world's great men have worked during the day and studied evenings to fit themselves for greater things. But it requires a good constitution generally to do this.

A Ga. man was able to keep it up with ease after he had learned the sustaining power of Grape-Nuts, although he had failed in health before he changed his food supply. He says:

"Three years ago I had a severe attack of stomach trouble which left me unable to eat anything but bread and water.

"The nervous strain at my office from 6 A.M. to 6 P.M. and improper foods caused my health to fail rapidly. Cereal and so-called 'Foods' were tried without benefit until I saw Grape-Nuts mentioned in the paper.

"In hopeless desperation I tried this food and at once gained strength, flesh and appetite. I am now able to work all day at the office and study at night, without the nervous exhaustion that was usual before I tried Grape-Nuts.

"It leaves me strengthened, refreshed, satisfied; nerves quieted and toned up, body and brain waste restored. I would have been a living skeleton, or more likely a dead one by this time, if it had not been for Grape-Nuts."

Name given by Postum Co., Battle Creek, Mich. Read "The Road to Wellville," in pkgs. "There's a Reason."

Ever read the above letter? A new one appears from time to time. They are genuine, true, and full of human interest.



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Keeping Out the Rats

A WISCONSIN farmer estimated that for years the rats got from fifteen to thirty bushels of barley every season from his granary. He tried every known way to get rid of the rats, but failed. He tried every season to stop all the rat-holes, but still they gnawed through.

Last year, while putting concrete floors in his barns and granary, it occurred to him to make his granary rat-proof.

On the walls of his granary he tacked laths perpendicularly, a foot apart. Over these he stretched and tacked chicken-wire. Then put on a coat of cement about an inch thick. The chicken-wire holds the cement until it hardens. He now has a solid cement granary, unbreakable and rat-proof. The cost was insignificant.

WILLIAM H. HAMBY.

Economy Swinging Gate

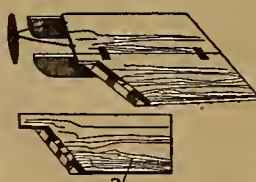


THE gate illustrated is economically made, since it requires no hinges, hook or fastenings. The only hardware required is a few nails and a strong iron rod a foot long, which serves as a pivot. Even the rod may be dispensed with and a hardwood pin used. Other merits of this gate are the impossibility of its sagging and the ease with which it is opened and closed. It swings either way.

To make it, take a strong, seasoned pole six inches or more in diameter and five feet longer than the gate is wide. Five feet from the larger end, bore a one-and-one-quarter-inch hole. Drive an inch rod into one of the gate-posts, and into the other gate-post set two wooden pins far enough apart to accommodate the other end of the gate. If desired, the second gate-post may be forked. The gate itself may be constructed of poles or boards. If poles are used mortise them into the top pole. If boards are used spike them to a side of the top pole which has been dressed flat. Two stakes driven into the ground at the free end of the gate, one on each side, gives strength to the bottom of the gate. Now fasten a box or a V-shaped trough to the overhanging end of the top pole and weight with rocks to balance the gate. To open the gate, raise the free end over the wooden pins and push open.

M. R. GRAY.

One-Horse Corn-Cutter



THIS corn-cutter takes the back-ache out of corn-harvesting as usually done by hand. Make a sled two feet wide with runners of two-by-six lumber, four feet long. Cover the top of sled with boards running lengthwise, all except four inches on the left-hand side. This space is left to support the cutter-table (2), which is made of a board four feet long, eighteen inches wide and one inch thick, shaped as in the sketch.

The shaded edge slants at an angle of forty-five degrees, with the bevel on the top edge. On the under side of this bevel, screw an old hand-saw with its back edge sharpened for the cutting edge and projecting about two inches. Fasten to the sled on the four-inch space with strong strap hinges.

Use a short singletree and a steady horse. Tie the four hills of corn together wherever shocks are to stand. The operator, sitting on the sled, then drives up the left-hand side, next to the shock-row and down the right side, drawing the corn to the knife with the right arm and receiving it as cut with his left arm. He also carries it to the shock in the left arm. One man can cut forty shocks per day. A similar knife can be put on the right-hand side, and two men can work at the same time. Did you do your cutting as easily as this this year?

S. S. TWILLEY.

Lifting an Auto Alone



IF YOU have had the backache from working in a cramped position under your auto, the device shown in the accompanying drawing will be of interest. It was built by a one-armed farmer of California and serves to lift the auto when he wishes to work beneath it. It takes the place of a pit.

The lift is made of two three-by-three-inch sticks which are long enough to fit under the axles with some to spare. These are held together with two three-fourths-inch rods and are attached to heavy timbers on the floor by pieces of gas-pipe flattened at the ends. The auto is lifted by working a floor windlass as shown in the picture.

Chains run from the windlass to the front rod, and the machine is thus lifted to whatever height is desired. While the lifting rigging is made of selected material, the safety of the person working under the machine can be further insured by placing blocks under the supporting timbers after the automobile has been raised.

JOHN Y. BEATY.

Our Useful Signal-Bell



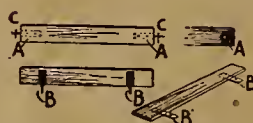
DURING the bad weather of autumn and winter we husk corn and do many odd pieces of work in the barn. To save the din of ringing the dinner-bell or hallooing until the women-folks become hoarse, we have placed upon the wall of the barn a good-sized gong.

A clapper is provided, which is attached to a wire running to the rear porch and a small lever, worked easily, sounds the gong for us. It can be heard in any part of the barn and is a really valuable signal when we are needed at the other end of the line.

GEO. W. BROWN.

EDITOR'S NOTE—This is a good idea. Experience will enable the family to work out a "clapper code" by which messages of a simple character can be transmitted, so that the hell will tell more than simply "come to dinner"—though that is a most important and agreeable message. And if the barn is not so situated as to make this scheme workable it will cost scarcely more to install an ordinary electric bell equipped with a push-button at the house. One cell of dry battery will work it under ordinary conditions, and two will certainly do the business.

The Ideal Endgate



THE sketch shows my best way of fastening an endgate in a hog-rack. The endgate is made of two separate pieces. The lower one has projections that fit into the bottom of the rack, and the upper one has projections on the side that fit into holes in the sides of the rack.

To make the endgate, bolt or screw two pieces of flat iron having tapering ends (AA, at left portion of sketch) to the sides of the board to be used as the upper part of gate. The ends (AA) should be provided with keys (CC). Similarly bolt BB to the lower board. The right-hand portion of the sketch shows the parts into which irons fit. This endgate cannot be raised by hogs, because it is fastened to the sides of the racks.

I have found this to be the best way of fastening the endgates, because it requires no wrench; the fingers are enough. It is also quickly and easily put on and off, and can be put on while up against a hog-chute or building.

Pieces AA should be fastened on the inside of the gate so as to pass through top rail a little distance from the end.

E. L. SNIDER.

Never-Slip Farm Ladder



THE valuable little contrivance shown in the sketch can be made in a few minutes and is easily applied. Simply take two pieces of sheet metal about six inches long and one and one-half inches wide, bend an inch of each end square, and punch two holes in the center of each piece. Now spike the flat sides of these on the bottom of your ladder, and you will find that you can climb it at an angle of forty-five degrees without any danger of it slipping.

J. M. NEWTON.

Wheelbarrowed Grindstones

IT'S a job to move a grindstone. I wanted an easy way to do it. I used two idler-wheels from an old treadmill. Any light wheel would have done. These I bolted to the outside grindstone legs on one end. Use only two wheels. The other two legs hold the grindstone steady. Of course, to make the grindstone level, the legs on which the wheels are placed must be sawed off a little. My stone stands as solid now as it ever did. At the same time it is easily moved.

CLIFFORD E. STERNBERG.

The wise farmer observes the mistakes of other people and learns to avoid them, while quickly adapting new methods that have stood practical tests.

Headwork Prize

The first-prize contribution to this page is "The Ideal Endgate" by E. L. Snider.



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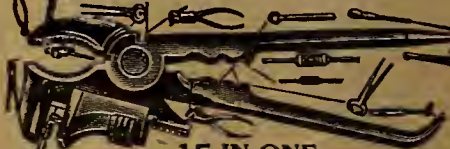
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The Logical Car For The Man Who Wants All These Advantages

Light weight

Less tire trouble and expense

Less up-keep cost

Less annoyance

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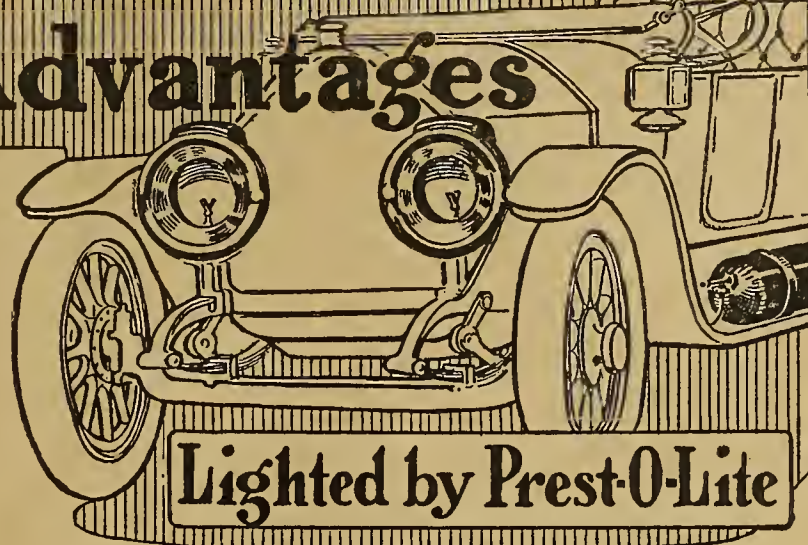
Greater speed

Greater hill-climbing ability

Lower price

Greater safety at night

Better and cheaper light



If you don't know why a gas-lighted car has all these advantages over an electric-lighted car, now is the time to find out.

Why electric lighted cars are heavier

Prest-O-Lite weighs little, and its operation consumes no engine power.

An electric lighting system weighs from 150 lbs. to 250 lbs., and consumes over 10 per cent. of the power and fuel used in a car of moderate power and price.

When a motor car manufacturer adds 150 pounds or more of dead weight, the car must be strengthened throughout. This calls for heavier frames, axles, springs, etc., and larger tires—in short, the weight of the electric system is only one item in the increased weight of an electric-lighted car.

And since the electric system consumes 10% of the engine power, and because the engine also has a heavier car to pull, a larger engine must be provided.

The final result is a heavier car, consuming more fuel and lubricant, wearing out more tires—more expensive to buy, more expensive to operate and maintain, more complicated, more troublesome, and less reliable.

To prove this to yourself, take the gas-lighted cars of 1910 and 1911, and compare them with the electric-lighted 1913 and 1914 models of the same make. Note the difference in engine size, tire size, and weight of car.

Take any of the 1914 models which have been re-designed to carry electric systems and make the same comparison with the 1913 model.

Then remember that the chief difference between the new car and the former model is a complicated, unreliable lighting system, giving poorer practical road light, and five to ten times more expensive to use than Prest-O-Lite.

Convenience

At an expense of only \$3, for an Automatic Reducing Valve, any Prest-O-Lited car can be so equipped that it is no trouble at all to light the lamps with a match. If you want to go still further, and light and extinguish any or all your lamps from the driver's seat, you can do it by installing a Prest-O-Liter, or any other good auto-

Electric lights consume 10% of the power and fuel

You can't create power out of nothing. Electricity is a form of power. It takes power and fuel to create electricity.

To show how much fuel and power it takes on an automobile, a series of tests was conducted on the Indianapolis Motor Speedway in July.

The result showed that on cars of 40 actual horsepower, the electric system consumed about 7 per cent. of the power and fuel.

And on cars of moderate power and price (25.6 H. P., usually rated at 30 H. P.), the electric system consumed 10 per cent. to 12 per cent. of the car's power and fuel.

So you can see that electric lighting not only takes fuel, but also cripples the engine.

We'll gladly send you a full report of the Speedway Tests.

To make tests of your own, run an electric-lighted car as far as it will go on a gallon or half-gallon of fuel, then disconnect the dynamo and note the difference in mileage on the same amount of fuel.

Or if you have a gas-lighted car in good condition, test it on a hill alongside a new electric-lighted model of the same make, and see which car goes up the hill quicker.

Then write for the report of the Speedway Tests and you'll know why.

Prest-O-Lite gives better light

Prest-O-Lite does not send a thin dazzling beam of light a mile down the road where you don't want it, but Prest-O-Lite does give more and better light on the road in front of the car where you do need it.

The real cost of electric lights

Talk about the "economy" of electric light—here's what electric light really costs, on any car of medium price and moderate power:—

10% to 15% more tire expense.

More general up-keep, due to weight.

10% more fuel, on account of weight.

Another 10% more fuel to run the electric dynamo.

At least \$12.50 per year for battery renewal (based on 2 years battery life, which is longer than the battery will last).

\$3 to \$6 per year for light globes.

At least \$15 per year for electric repairs, (conservative, but based on 2 years use).

When you have footed that up to suit yourself, see how it compares with what you or your friends have ever spent for gas light.

The average user of Prest-O-Lite pays less than \$10 per year for light—a great many pay as little as \$5 per year—it depends on how much he uses the light.

But it's different with electric lights—you pay for the light whether you use it much or not, and may pay even more if you don't use the light at all.

If your car was designed to carry an electric lighting system, a change to Prest-O-Lite would still insure a substantial saving in addition to the reliability and safety which Prest-O-Lite affords.

Who can repair an electric system?

You expect to take care of your car. You're probably a pretty fair mechanic.

But are you an expert electrician?

Do you know that the average garage or dealer cannot repair electric systems—doesn't even pretend to be able?

In case of a break-down, you'll either have to repair it yourself, or sit down and wait for a factory expert to come to you.

There are lots of parts to an electric system. It has a lot of mysterious troubles. Get one of the Instruction Books for taking care of electric systems and read it. See how much of it you understand.

If you don't want the job of taking care of the system, see if the dealer will guarantee to take care of it for the first 18 months, without expense to you.

Then remember that Prest-O-Lite is reliable, requires no expert repairing, and that Prest-O-Lite service is yours to command in every nook and corner of the country.

Gas lights are safe

Electric lights are apt to go out instantly and without warning at any time.

Suppose you are running 15 or 20 miles an hour on a narrow road, and your lights suddenly go out. The effect is to make you almost blind for several minutes. Where is the car apt to be by the time you stop it?

Isn't the safety of your family worth considering?

Prest-O-Lite does not fail suddenly. Even if you carelessly allow your gas supply to give out, the light dies down very gradually, giving plenty of warning.

The Prest-O-Lite Co., Inc.

701 Speedway, Indianapolis, Ind.
Exchange Agencies Everywhere
(Contributors to Lincoln Highway)

Read this free book before you buy any car

It tells all about the Speedway Tests, shows the cost of Prest-O-Lite and electric light, tells why automobile manufacturers use electric lights against their own wishes, contains letters from electricians and electrical engineers who use Prest-O-Lite on their own cars, and many letters from automobile owners who have discarded electric lights. Also tells why the compressed-air starter is the coming starter—in fact is chock full of real information on the whole subject.

This book is not written in a technical way. It is easily read, easily understood, and makes the whole thing clear as daylight. No matter whether you're figuring on gas light or electric light, no matter what car you're thinking of, read this book first so you can do your buying with your eyes wide open.



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Live Stock and Dairy

Extra Feed-Boxes

By R. E. Rogers

MOST old barns have an arrangement of stalls so that one end stall is narrow and contains a small gate to get from the feed-alley to the stall itself. Recently I saw a feed-box for grain fastened to the side of the barn by hinges so that when used it swung down in this small gateway and so provided an extra stall for an extra horse's use. When not needed it was easily turned up against the wall and fastened, to allow passing through the doorway as usual.

While speaking of feed-boxes, I might mention that I have recently tried replacing the bottoms of wooden boxes with rich cement. This makes a tight fit, and so far has not cracked or chipped. It is sanitary in every way.

To Steady Down a Colt

By David Buffum

A FRIEND of FARM and FIRESIDE in Vermont has a filly, recently purchased, that has the bad habits of galloping on the road and bolting out of the road if reined in. He proposes to put her in a three-horse team, using her in the middle between two steady old horses, and desires to know whether this plan is considered good horsemanship.

It is. The team should, however, be required to do farm work, for there is nothing like farm work to steady down a colt and make it level-headed and sensible.

Firmness that is gentle and quiet may very likely prove to be all that is needed in such a case.

If this filly has not been properly bitten, as I am inclined to think, the following treatment will be of help:

Take a piece of cotton rope, about the thickness of the first finger, and tie one end around her neck, rather tightly, about where the collar would come. Run the other end through her mouth and back through the part round her neck. Now pull on this cord, and her nose will be drawn back to her breast. Hold for a moment, then release, and repeat the operation. Continue this exercise for some five minutes. Then put her up, and repeat the lesson several times every day until she readily gives up to the slightest pressure. This will give her a softer mouth and take the stiffness out of her neck.

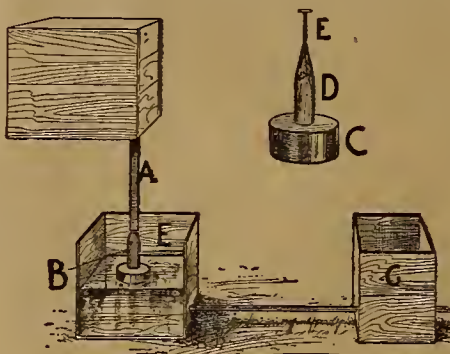
After this biting and the work in the three-horse team the probabilities are that her behavior will be greatly improved and that all she will need is regular driving and good judgment in handling.

Automatic Watering Device

By A. Luning

THIS watering system for stock will keep the right amount of water in the various drinking-cups in the stable and yards. From the tank containing the water a short pipe (A) not over a foot long is dropped to a receiving-tank (B) on a level with the cups, one of which (C) is here represented. The valve which floats on the water of the first receiving-tank is separately illustrated.

Take a circular piece of light wood (C), and to it nail a piece of wood shaped as in D. The end of D fits into the pipe (A).



E is a long nail driven into the end of D to keep the valve in place when the water in the receiving-tank becomes low. When the water in the receiving-cup gets low the valve, of course, drops and allows more water from the large tank to flow into it. A pipe leading from this first cup to the other cups keeps the level in all cups the same. I have found wood satisfactory for the cups. The sizes of the various tanks and cups will be determined by the number of stock to be watered.

Belgian Hare Errors

By P. F. Woodworth

WHAT the contributor in the March 1, 1913, FARM AND FIRESIDE has learned about the Belgian hare has evidently been acquired by methods that were detrimental to the welfare of the animal.

Belgian hares are domesticated rabbits (or hares). They have domestic habits and do not require holes in the ground in which to live, but clean, dry hutches in some shed or outbuilding. They should not be allowed to run together in one pen, as such careless methods of breeding will ruin any animal.

Here in Massachusetts the best breeders never allow their hares to run out of doors; the danger from dogs is too great. Then, too, the hares are more easily handled in hutches.

My hares are fed twice a day, on oats, hay and most any kind of roots, and, as I am obliged to buy it all, I know just how much it costs to feed them. I assure you it would take ten times fifteen hares one year to eat as much as a cow would eat in six months. They do not eat the boards in their hutches, because their rations are balanced, and they are contented and happy.

I have young hares three months old that weigh four and one-half pounds at a total cost of four cents a pound, but I do not get a chance to eat them, as they are in demand as breeders.

The necessity of procuring meat without a prohibitive price has turned the public to the Belgian hare, and unless too many people employing the loose methods described by our Western friend enter the business the industry will forge ahead to the everlasting benefit of many a struggling farmer and hard-working mechanic.

Milking at a Ripe Old Age

By Whitney Montgomery

REV. W. L. PATTERSON and wife, my neighbors here in Texas, both of whom are over seventy years of age, are making a splendid demonstration of what people well along in life can do in the dairy business.

When Reverend Patterson's eyesight began to fail he gave up the ministry and went to work to make a living from his little farm. He started in with two or three Jersey cows, and he has gradually increased his herd until he now has about fifteen head of high-grade Jerseys.

At first Mr. and Mrs. Patterson found a slow sale for their butter, not realizing more than fifteen or twenty cents a pound for it. Mrs. Patterson soon learned that the best was what the people wanted, and she set in to make the best. She has succeeded.

She puts a printed slip, bearing her name and address, in with every pound of butter that she sends to market, and her customers accept that slip as a guarantee.

Mr. and Mrs. Patterson now sell about thirty pounds of butter a week, at thirty cents a pound.

Mr. Patterson used to have to drive six miles to the nearest shipping point to send his butter to market. But parcel post has removed this bugbear. He can now send it from his own gate direct to his customers at a very small cost.

Mr. and Mrs. Patterson do their own milking and butter-making. How many other people over seventy years old can boast of such achievements?

In cold rains do not tie up the horse's tail. The long tail prevents the water from running down the inside of his legs, and keeps off a current of air from his belly.

Cause and Cure of Sweeny

By Dr. A. S. Alexander

A MICHIGAN subscriber asks what causes sweeny shoulders in horses, and whether they can be cured. The common cause of sweeny, or wasting of the muscles of the shoulder, is sprain of the parts, brought about when a young colt is plowing or pulling hard in any way. It is most commonly caused when the colt is placed in the furrow, as then it is constantly slipping in and out of the furrow. It is best to place a colt on the land side when learning to plow.

In many instances so-called sweeny is wasting of the muscles of the shoulder, due to some chronic foot disease which causes lameness. Navicular disease or chronic corns or ringbone commonly leads to wasting of the muscles of the shoulder. It is therefore necessary, in every case, to decide what is the true cause. If it is from foot lameness the muscles will grow in again, if the lameness is cured.

In ordinary sweeny without lameness the animal should be kept at work, and three times a day the wasted parts should be thoroughly rubbed and the skin pulled away from the flesh. At night a strong liniment may be rubbed in. If lameness is present stop working the horse, and rub with liniment twice daily. In addition massage the wasted parts, or have the parts blistered with cerate of cantharides, after removal of the hair. The blister may have to be repeated several times, at intervals of two, or three weeks.

Getting the Hothouse Lamb

By W. B. Ellsworth

WE HAVE raised sheep on \$200 land for about fifteen years, never making any large profit, but keeping ahead all the time, until four years ago when I decided to have the lambs come as early as possible. In the first place I bought a Tunis ram, for I wanted to raise fall lambs entirely, and this will work out later on. Part of the lambs came in February, and the rest up into April that year.

In 1911, under same conditions, the lambs started in January, and were about all here by March 1st. That winter was exceedingly cold here. My sheep were in a dry barn nights, out during the day; the barn was not extra warm, as no cracks were battened. I did not spend a night or a part of a night with them, but would find from one to three lambs on mornings ten below zero up and all right by the side of the mother. I lost a few, but these I would have lost under any conditions, as they were the weak, puny ones barely alive at birth. It seems that a lamb in freezing weather will freeze dry almost immediately, while on a damp, wet day you will have to take them to the house. I have fed alfalfa-hay and clover each year.

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Trouble-Magnifiers

By E. A. Wendt

SOME folks are always cranky; their life is one long growl; a ventilated stockin' is enough to make 'em howl; they grumble when the sun's hot; they whine about the rain—I'm wond'rin' what right they've got to grumble an' complain.

Why, if they lose a dollar or a cow breaks in the corn, they sweat around the collar an' blow their trouble-horn; they talk of it while eatin', an' they dream of it at night; they think of it in meetin', and they think they're doin' right; yet, all the time they're groanin', beside 'em there may be someone that does no moanin', but's in constant misery. I know folks, workin' daily—an' you don't hear 'em complain—who'd give their earnin's gaily to free themselves from pain.

I'm wond'rin' how so many that are strong an' fit to work, with seldom any aches or pains to make 'em wince or shirk, can flare up in a flurry or be crabbed an' complain, when they've no cause to worry, an' not one ache or pain.

In hot weather, and in all weathers if the horse is hot, sponge his eyes, nose, dock, the harness marks and the inside of his hind quarters when he first comes in.

Prince and Peasant

By J. T. Lewis

*A few seem favorites of Fate,
In Pleasure's lap caressed.—Burns.*

THESE words of Scotland's greatest poet can be applied to the lower animals as well as to the human family. Of all the domestic animals, the dog and the horse are perhaps the most closely related to man.

Some dogs are coddled and petted and spend their useless lives in the very lap of luxury, and at their demise are buried with



The prince

pomp and ceremony, while others with an unlimited capacity for friendship and fidelity are friendless outcasts. A kind-hearted old liveryman who lived with his horses and loved them said one day: "A horse first, next a woman, and then a dog."

We have here two photographs from life, contrasting the high and the low—the prince and the peasant—among horses. The lady who toils not nor spins bestows her affections and caresses upon her favorite horse. He fares sumptuously every day, "feels his oats" and struts like a militia captain on parade.

In the other picture we see a different type, wretched and forlorn. Through all his life this old drudge has toiled faithfully in



The peasant

summer's heat and winter's snow, but he is like some members of the human family who, in the eyes of many, are disreputable in proportion as they are useful. Let us hope that those who look on these pictures and read this article will give honor where honor is due.

To prevent scratches, dry the horse's fetlocks and heels when he comes in, especially in winter; and rub on a little glycerine or vaseline before he goes out in snow or mud.

There is an operation called "ventricle stripping" for the disease of horses called roaring. Doctor Hobday after some years of experience asserts that the operation will so far cure the disease as to render useful fully nine out of ten work-horses, and seventy-five per cent. will be able to gallop without any trouble.



Avoid the Dangers of Stall Feeding

DR. GILBERT HESS,
Doctor of Veterinary Science
Doctor of Medicine

I want to warn you in time that stock taken off pasture and put on dry feed are pretty apt to get out of fix, because corn, grain, hay and fodder do not contain the laxatives so abundantly supplied in grass.

Some of your animals are sure to become constipated, others off feed, rough in the hair, with paleness of the eyes, lips and nostrils, or the legs may stock or dropsical swellings of the abdomen appear, or the urine may become yellow and thick; but the common ailment of all, especially among hogs, is worms, worms.

Dr. Hess Stock Tonic Makes Stock Healthy. Expels Worms.

Being both a doctor of medicine and a veterinary scientist, I formulated Dr. Hess Stock Tonic to correct these evils. It contains a laxative substitute for grass, diuretics to remove dropsical swellings, tonics to improve the appetite and increase digestion and vermifuges to expel worms.

So sure am I that Dr. Hess Stock Tonic will put your animals in a thriving condition, the ailing ones healthy and expel the worms, that I have authorized your nearest dealer to supply you with enough for your stock, and if it does not do what I claim, return the empty packages and get your money back.

Right now is the time to feed Dr. Hess Stock Tonic, because it's the cow in the pink of condition that fills the milk pail, the steer with an appetite that lays on fat, the horse that digests its dinner that pulls on the bit, the hog that is well and worm-free that gets to be a 200-pounder in six months.

Dr. Hess Stock Tonic is never sold by peddlers—only reliable dealers; I save you peddler's salary and expenses, as these prices prove: 25-lb. pail \$1.60; 100-lb. sack \$5.00. Smaller packages as low as 50c (except in Canada, the far West and the South).

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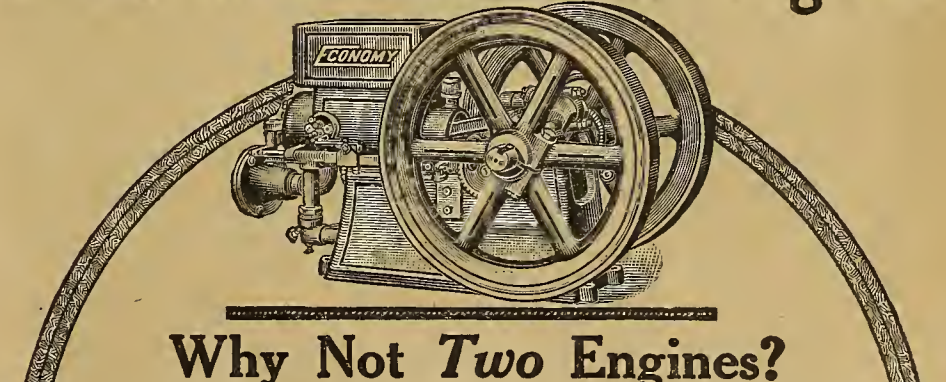
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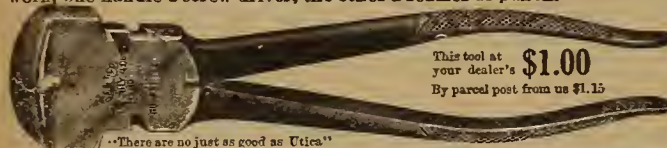
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Garden and Orchard

A Ladder Well Made

By Paul R. Strain

THIS ladder which I designed for myself is lighter than an ordinary ladder of the same length, far stronger, and if kept dry will last well. The material in it cost me thirty-eight cents, being ten cents for second-hand pipe from a junk-dealer and twenty-eight cents for the yellow-pine strips out of which the nprights are made.

Had I wanted a longer ladder I would have made one in the same way in any length up to twenty feet.

Taking three strips of wood ten and one-half feet long, four inches wide and three quarters of an inch thick, I dressed them by working off, and rounding the corners down, to three and three-quarters inches wide at the bottom and two and three-quarters inches wide at the top, boring holes for the pipe ladder-rungs twelve inches apart. I used half-inch pipe for the first four rungs, three-eighths inch for the next four and quarter-inch pipe for the last two rungs.

I tapered the ladder, making it twenty-two inches wide at the bottom and thirteen inches wide at the top. Swedging out, or spreading, each end of the pipes after they are in place as rungs will prevent them coming loose.

The advantage of having three nprights in a ladder is the greater rigidity and strength three light strips give compared to two ordinary, heavy ones. The advantage of the pipe rungs is that they can never wear out or break.

If there is one thing in which we of the country fall below our city friends it is in the taking care of our health. We might have ideal conditions; but we really fall far short of them. Flies, bad water and unbalanced rations are too common. Therefore we welcome the Ohio proposal for the holding of county health institutes along the general lines of teachers' institutes.

Serious Squash Enemies

THE insects which have been troubling an Illinois reader's squash-vines, of both summer and winter varieties, are quite common ones and often very destructive. One is the squash-borer, larva of a "clear-wing" moth. It bores into the stem of squash and pumpkin vines, and can only be dislodged by cutting out with a sharp knife, cutting lengthwise of the vine. Dust may be rubbed on the wound to facilitate healing. My plan has been to cover the running vine at intervals of a few feet with moist soil, packing it down well over the base of the leaves so that roots will form at the joints and enable the vine to live even should all connection with the main root be severed. It is also recommended to plant early varieties, such as Crookneck, to serve as catch or trap crops. They will draw the eggs and larvae, and may then be pulled up and destroyed by burning. The other enemy is undoubtedly a late brood of the large black squash-bug. The young immature insects sometimes come on in large numbers in the fall. The only way to treat them successfully that I know of is to gather the squashes, then scatter some dry straw over the vines, spray this with kerosene and set fire to it. Or if the kerosene spray is put directly on the vines thoroughly enough most of the bugs or larvae will be killed. We should try to get rid of them so as to prevent their wintering over to plague us the next season. T. Gr.

In the raisin, wine and grape-juice industries there is a waste in the seeds of about 3,000 to 4,000 tons in this country every year. This is an age of waste-prevention, and so the Department of Agriculture has had experts trying to find what, if anything useful, can be done with this offal. The results are interesting, especially to vine-growers. Out of these seeds is made a meal which carries twelve per cent. protein, and therefore ought to be a good stock-food. Besides a syrup from which alcohol can be made, and some other valuable things, an oil is derived from the seeds which is valuable either for soap-makers or as a substitute for linseed-oil.

Plums Won't Grow Peaches

By O. M. Taylor

IT IS difficult to secure peach-trees worked on plum stock. An examination just made of over one hundred catalogues of nurserymen in various parts of the United States fails to find such stock listed, while all of the publications examined list peach-trees on peach stock. Hundreds of thousands of peach-trees are budded each year at Dansville, Rochester and Geneva, New York State, but none are grown on plum stock. If one must have trees on such

stock it will probably be necessary to arrange with some nurseryman to grow them. There would be no advantage, however, in planting peach-trees on plum stock.

A test of the relative value of peach stock and Myrobalan plum stock for peaches was made a few years ago at the Kansas Experiment Station. The results were decidedly in favor of the peach stock. The trees worked on plum stocks were not as strong growers as the others and began early to show signs of failing, and in almost all cases the trunks of the trees on plum stocks were decidedly enlarged just above the stock.

Have any of our readers any knowledge of the cultivation of blueberries? There is in Indiana a cultivated patch of two and one-half acres which in 1911 and 1912 yielded profits of about \$360 per year. The United States Department of Agriculture experts state that this berry promises well if selected strains are planted and properly cultivated.

Trees That Won't Grow

By A. T. Pfeil

VERY often we notice, here in Texas, that trees planted in winter or spring fail to grow, though they are green all the way up. If you have such a tree, dig it out carefully so as not to destroy the roots, shake off all dirt, then investigate the ends of the roots that were cut back when planted. You will in most cases find that these ends are black. Cut the roots back till the cut is fresh. Then set the roots of the tree or shrub in water for two to three hours. After this time plant again, water freely, and in most cases your tree will begin to grow. The writer has made a practical experiment of this. A shade-tree (Texas umbrella) planted on the sixteenth of January was green, but failed to put forth leaves on the first of June. I tried the above, and it produced new shoots. Also, a crape-myrtle planted on same day failed to grow. I dug it out, set it in water, and now it is growing.

Growing the Dewberry

THE dewberry is a nice fruit. I like its flavor. Yet I have never been able to grow it successfully or profitably here in this rather strong loam. It prefers a light, sandy soil. We had it growing wild on a sandy knoll in New Jersey. The dewberry is distinguished from the ordinary blackberry chiefly by its low, trailing habit of growth and its mode of propagation by tips instead of suckers. The Lucretia and Bartel are the two varieties best known in cultivation. If you have soil of a sandy nature, and are willing to train the plants to stakes or a wire trellis so as to keep the berries off the ground, I can see nothing in the way of growing fair crops of this fruit, especially if you plant more than one variety together so as to make sure of proper pollination. Varieties standing singly are liable to drop many of the blossoms without setting fruit. The general cultivation is the same as for blackberries or raspberries. Mulching may be useful, but is not essential to success. Remove the old canes after fruiting, and trim the new growth four or five feet high on the stakes. T. Gr.

It's Easy to Prune

By George S. Merryman

IT IS easy to get a long stick (A) that is bent at the end. At the end bend (B) of the stick split the piece of wood about five inches, and do the same at C. Then bore three-sixteenths-inch holes (D) in the center of the split parts of the stick so that any large nail can be put through them. Bend the stick just far enough to put a bucksaw blade into the slit at each end (EE). By taking hold of the long handle of the stick a limb can be trimmed at any height without climbing the tree.

Timberland is Valuable

By A. J. Legg

I CANNOT see how anyone can afford to burn any timber that would make lumber into charcoal at eighteen cents per bushel, now for twice that sum.

If one lives in a country where the lumber industry has not been developed he has not much idea of the value of timber. Our West Virginia people did not have much idea of the value of lumber twenty years ago, but now the most valuable land is that on which timber is yet standing, no matter how rough it is.

People sold timber very cheaply here a few years ago. A large tract of rough timbered land which was valued for taxation twenty-five years ago at less than one dollar per acre sold a few years ago at near thirty dollars per acre. It is a question of only a few years until all timbered land, no matter where situated, will be very valuable.

The Market Outlook

What Should Calves Eat?

By W. S. A. Smith

HAVE you heard expressed any opinions on the proposed law forbidding the slaughter of cattle under two years old?

It is impossible to form any definite opinion on a proposed bill until the bill is seen. An Iowa paper states that Representative Britten of Illinois, who introduced a bill designed to forbid the slaughter of cattle under two years old, says that if the 8,000,000 calves killed in 1911 had been allowed to live for two years they would have averaged in weight 1,400 pounds. I judge from this that they raise bigger cattle in Illinois than they do in Iowa, as 1,400 pounds for a two-year-old is a pretty good average for 8,000,000 calves, and I cannot help but feel that if the bill goes through the bill of fare for the calves for two years should be attached.

We Can't Get Feeders from the Ranges

We have formerly drawn our feeders from the ranges to make beef, and this industry, greatly reduced, is going to force us to get our stock cattle elsewhere. Now there really is no force about it, as we can afford to raise calves at a profit even on our high-priced land.

Calves are selling on the open market (Sioux City) as I write for \$8.60, weighing 365 pounds, thus bringing over \$30 per head, and they are not extra good.

Take the sand-hills in Nebraska, where so many of our best feeders come from. This rough land was priced to me at ten dollars an acre, and the meadow-land at twenty-five. As it takes ten acres to summer a cow, and one acre of meadow for winter, a 400-pound calf is costing the produce of \$125 worth of land. An acre of land in Iowa worth \$125 will produce fifty bushels of corn or ten tons of silage; and this ten tons of silage will, with the help of two pounds of oil-meal daily, keep a cow nine months before her calf is born, and keep the cow and calf six months after the calf will weigh over 400 pounds, with little or no deterioration in fertility of land if the manure from cow and calf is applied to the land.

It is needless to point out that if the cow is milked or two calves put on one cow the profits will probably be greater. Now suppose I had raised a calf on ensilage as stated, what am I going to do with that calf at six months' age? Turn him out and lose all the baby fat or feed him? I want to say right here, if he is turned out and weighs 1,400 pounds as a two-year-old; he is a crackerjack; and if he is fed he will make his greatest profit at sixteen to eighteen months. Under the proposed new bill I would have to hold him until twenty-four months of age, even if I did let a good market slip by.

I had yearlings at the International three years ago which weighed 1,220 at twenty months of age. But remember it takes capital or credit and skill to make baby beef, and above all it takes quality; and it takes quality to profit any man to keep a steer two years on high-priced land.

Any bill that would force us to hold scrub steers until they were two years old would in a short time have to be followed by another bill forcing him to raise calves.

I am satisfied this is the wrong way to increase beef production. There are some things a man thinks and some that he knows. I know that the time has come when the farmer, through ensilage and the use of his coarse feed, can keep a cow and raise a 500-pound calf at a greater profit, taking into account the upkeep of his farm, than he can raise grain and sell it, but to do so he must have capital or suitable credit. If I send fifty cows out to my farm to raise calves, I know it is nine months after they are bred before they have their calves, and it is sixteen or eighteen months later before I can sell as baby beef; under the proposed new law, two years. No sane man is going into a deal like this on a six-months' note, with no surety of his renewal, however sure the profits will be.

Where Can We Get Money?

A merchant can turn his goods in ninety days and meet his six-months' note. A farmer starting out to raise calves must have a different credit or know that if he makes good his notes will be renewed. Even starting out in a moderate way with ten cows and a bull it means one thousand dollars and two or three years before he gets much return if he buys beef cows; and if he buys milch cows the progeny will make poor two-year-old steers, for the dual-purpose cows in this country are as yet decidedly in the minority.

A campaign of education among our growing landlords would be a great help in beef production, as these men have capital, and they ought to know that the time has come when beef can be produced at a greater profit than grain.

There are a great many of us who, I am sure, have failed to realize that whereas in an ordinary winter we have to feed our permanent stock, such as our outfit of cows, horses, hogs and sheep, for three months, but this year, when it is over, we will have had to feed nine months. This ought to receive considerable thought, as it will have a great bearing on our spring markets.

In the drier parts of the country, and that this year covers a large area, pastures have been of no use from May 15th to August 15th. In many large sections feed will have to be shipped in this year so that we will have this winter new markets for our surplus grain and hay, and even in the more favored sections we are up against practically nine months of feeding. Such being the case, it stands to reason the surplus will be on every farm smaller than usual, and it will be a pretty good idea before selling crops at the present tempting prices to figure carefully just how much surplus there really is. Because if the farmer really runs short in the early spring months it will be a pretty expensive proposition to buy feed.

Nature has a way of evening things up. We went through a mild winter last year, and a hot, dry summer. If any crops are to be raised next year we must have moisture, and, although it would be foolish to prophesy a severe winter, the chances are we will have plenty of snow; and it is a wise precaution, even if it does not come, to figure on it. There is no chance of farm products going lower, but there is a great probability of everything going higher. Just as soon as grass cattle are all in and the real winter begins, all live stock must and will bring stronger prices for finished products.

Only sixty million dollars' worth of hogs died of hog-cholera in 1912! It has been a constant fight to get the loss down to that point, for hog-cholera has existed in the United States seventy-five years.



At the Bank

CASHIER—"I'm sorry, but I can't cash that check for you."

PAYEE—"Why not?"

CASHIER—"I think it's a bogus check."

PAYEE—"What makes you think so?"

CASHIER—"It appears to have been signed with a free and rapid hand, while Mr. Tighton always signs checks reluctantly."

Farm profits will be increased more substantially by increasing acreage yields than by increasing acreages.

Watch the Hog-Market

By L. K. Brown

THE hog-market has been bumping over some pretty rough road lately. The season has advanced far enough so that the packers have begun their annual bear campaign. Persistent liquidation has given them the advantage in their price raids. However, the country is inclined to hold back after the declines and so hold the killers temporarily. During the same weeks last year the packers effected a \$1.50 decline, but they are not expected to be as successful this year. Just so long as disease conditions force the growers to sell, the buying interests have the upper hand in controlling prices. Conditions do not seem to have improved any lately, especially in Iowa. At times as high as fifty per cent. of the arrivals are pigs, thus showing how complete the depletion of the late winter and spring markets will be.

Prime shipping weights are scarce and order buyers are forced to take medium packers to supply their needs, thus strengthening the market in this class. There is a general desire to get away from high cost, so the light shipping weight has declined till it no longer commands a premium. This year's corn is becoming apparent, as the sows that have come in recently are beginning to carry more fat. These seasonal changes have narrowed the price range greatly—light-weights have declined sharply, and heavy-weights but little, thus bringing about a very narrow range.

A lamentable fact that has recently appeared is that sickness has extended to the heavy hogs. Heretofore it has been confined almost entirely to the 1913 crop, but if it now becomes prevalent among the older hogs liquidation and depletion of the next few months' supply will be even more complete and disastrous to the market.

Honesty Through Legislation

MANY laws seem oppressive, and many are oppressive. The kind that are oppressive are mostly the bad laws. The State of Vermont still maintains her reputation for high-class maple products, although in most sections dealers' claims for the purity of maple-sugar and maple-syrup are regarded with suspicion by the country. In Vermont a law was enacted in 1890 which provides a fine of not less than fifty dollars for any person who shall adulterate maple-sugar, maple-syrup or bee-honey with cane-sugar, or with any other substance for the purpose of sale; or who shall knowingly sell such adulterated sugar or honey.

The law further provides that one half of each fine, on conviction, shall go to the person making the complaint. This is a good law, even though it seems to encourage tattling. It protects a big industry in that State, and, best of all, it protects the people who are trying to do an honest business. The men who want to make, and are making, pure maple-sugar are not forced, in order to stay in business, to adopt the methods of unscrupulous competitors. It is about as much satisfaction to find a good law as to find pure maple products, and Vermont is to be congratulated on having both.

Ambition and dreams cemented with a compound of hustle and hope pave the way to Competence Haven.

Meeting the Sheep Demand

By J. P. Ross

THE features most worthy of note in the sheep-market of late have been the increased demand and consequent rise in prices of fat sheep of all kinds, and the urgent demand for feeding yearlings and lambs. Prices of these were so high as far back as August, when feeding sheep ranged from \$4.25 to \$4.75, and lambs up to \$7, that many would-be buyers held back in the belief that, later on, they would be able to do better, only, as they now know, to be left altogether out of the market, since the packers have been driven to invade the half-finished supplies to meet their requirements. At the present writing feeding lambs of a desirable sort are worth up to \$6.75; yearlings to \$5.75; wethers, \$4.65; and ewes, \$4; and no sort overplentiful.

The World's Demand for Mutton

Regarding the probabilities of any large amounts of frozen mutton and lamb coming into this country, the following figures should help to the forming of an intelligent opinion. The average wholesale price of Australian mutton in London last year was 6½ cents per pound, and of lamb 9½ to 11 cents; of New Zealand, 7½ to 9 cents for mutton, and from 10 to 12 cents for lamb. The prices of South American frozen mutton and lamb are about the same as those of Australia. The opinion of experts from all these countries seems to be that for the present and for some time to come Great Britain and Europe generally will need all they can supply.

Reports of the wool-market from all over the world are most encouraging. American buyers were numerous at the recent sales in London, and no tendency to any break in prices was visible.

Our farmers of the older generation have so long been accustomed to regard sheep merely as wool-producers, that they often find it difficult to believe that there is now greater and more certain money to be made from them in their double capacity of mutton and wool growers. This is unfortunate because it leads many sheepmen, especially in the Corn Belt and New England, to part with their flocks, generally at very inadequate prices, greatly moved thereto by needless fear of the effect of the tariff changes which are to come into effect in December. This threatens a greater evil because it is, to some extent, to these States that we shall have to look for much of both our mutton and our wool, since they are the great producers of the grain and the forage crops which will have to be relied on to feed the well-finished sheep and lambs which the growing taste for mutton will demand.

Making the Best of Market Needs

It is most desirable that the men of the Middle West, many of whom have for years taken pride in their fine Merino flocks, should appreciate the fact that, by crossing the ewes of their favorite breed with pure-bred rams of any of the down breeds, they can, without any violent sacrifice or loss, in a season or two become full participators in the profits which the growing popularity of lamb and mutton is certain to offer them. If any fears are entertained of incurring a loss of length or fineness of staple in their wools by this crossing of their Merinos with any of the strictly down short-wooled breeds, they can still participate in the improvement of the quality of the mutton by using a Cotswold, Oxford or Lincoln ram. The larger size of the lambs produced by crossing with either of these breeds would go far to cover any loss which might arise from some little inferiority which might be found in the quality of the meat, and it would require a very nice taste to detect any such inferiority.

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Crops and Soils

Do You Know Dry Farming?

By Ivar Mattson

IT IS doubtful if any large portion of our country has been more misrepresented and misunderstood than that portion of the dry-farming region stretching away from the foothills of the Rocky Mountains eastward to the sub-humid country.

It has been condemned as being the native home of grasshoppers, chinch-bugs, droughts, hot winds and blizzards. Others have characterized it as the most productive country in the world, having the most delightful climate, the richest soil and the easiest place to make a living.

Many erroneous ideas have grown up, such as "rainfall follows the plow." "dry farming is as safe as irrigation." and others "too numerous to mention." And it has not only been believed by real-estate men, but by even a large number of the settlers.

It is refreshing to note that through all this confusion comes a ray of strong, clear light. It is the light of intensely analytical, scientific investigation. The history of the country, its failures and successes, old and new methods, drought-resistant crops, rainfall, wind, hail, insects and speculation—in fact, everything that touches and affects dry farming in the Great Plains—has been thoroughly analyzed, and the result of this stupendous task, extending over a period of years and an extensive territory, has been crystallized into Bulletin 215 of the Bureau of Plant Industry (Washington, D. C.) by J. A. Warren.

It is a bulletin of only forty pages, remarkably free from technical terms and very readable for anyone who is in any way interested in the dry-farming country.

Read About This Country

In fact, there is no longer any excuse for anybody being misled about dry farming, when absolutely dependable literature covering the entire subject may be had for the asking. The writer, being himself fairly well acquainted with the territory under discussion, has learned things about this country through the bulletin he had seen all the time, but never fully comprehended.

It can be stated as an axiom that nobody knows his native country perfectly. It has taken a foreigner to write our best work on American institutions. The American Commonwealth. So it is with our several agricultural divisions. It takes a group of cold-blooded, unprejudiced scientists to make a complete and accurate survey upon which to write good bulletins.

It is the opinion of the writer that such bulletins as No. 215 should be written on all our agricultural divisions and that these bulletins should figure very largely in an elementary course in agricultural economics that might very profitably be taught in county agricultural high schools.

Such instruction would give our young farmers-to-be a better appreciation of the values of their own and other agricultural divisions. It would prevent the haphazard speculation in land that is now going on, and it would be a strong factor in making our rural population more stable. Too many are chasing a real-estate man's pot of gold at the end of his rainbow prospectus.

Our First Home in Michigan

By Mrs. Melville Palmer

WE ARE old settlers of Suttons Bay, Leelanau County, Michigan, and live on a farm near Suttons Bay village, which is a busy little town at the present time, but when we came here there were only three houses in the place.

My husband bought the land which we are on and paid for it while in the Civil War. He came home in '65. I was teaching school here and boarding at the time, but it only took us one year to make up our minds to go to farming, so he chopped down trees to make a place big enough for a log house, and after he got the logs all ready and the shingles made, the fire passed over and burnt up the shingles and blackened the logs, but he made some more shingles and built the house. In the spring of '66 we were married, and in the fall we moved into our house on the place where we are now living.

We moved out of the old house into the new one a long time ago, but I want the old log house to remain on the place as long as I stay, for, although we have had our share of sorrows, we also spent many happy days in the old log house.

When we wanted to make a visit he hitched up the oxen to the wagon and went, and we enjoyed the visit, too. Now we are getting old and gray, but I would not trade our farm for any farm I know of. Our main products are apples, potatoes and hay.

The cotton farmers of the South are slowly turning to hog-raising. They have every facility for this business, and will succeed if they study it. The universal testimony of stockmen is that there's more money in hogs than any other live stock—if it weren't for the cholera—and hogs grown on forage are not as subject to cholera as dry-lot hogs. Hogs will break up the one-crop system of the South—and that is to be desired. A one-crop country is a one-generation country.

When Farmers Get Together

[CONTINUED FROM PAGE 4]

"Reading exchange, ice, tool supply and shop, fresh meat, blooded stock, help, amusement, education, seed supply, buying and selling, and financial credit.

"All debts are paid, and there is \$69.87 in the general fund.

"Pooling has paid well, and the parcel post should aid us to sell more seeds and other products outside of stock still unsold. Of course, we will advertise more now than before. Advertising is an inseparable accessory to any line if you have goods that will bear the light of publicity.

"The seed committee will meet at my house Monday evening to divide the money on hand in direct proportion to the business each member has furnished. All the seed-raisers have been paid, and there is a fine lot of home-grown seed we know to be good. File a list of your wants immediately. All seeds we do not raise we will buy in quantity.

"If any of the members have roots or bulbs for sale they should notify the committee so they can be examined and tested. The variety must also be known.

"More old people and children in their teens will be asked to aid us next season."

Use up the corn-fodder early in the season while it is bright and fresh, saving the sheltered bay for feeding when the weather grows cold and stormy.

Corn That Yielded Well

The Experience of One Wisconsin Man in Developing a Corn for His Conditions

By W. A. Toole

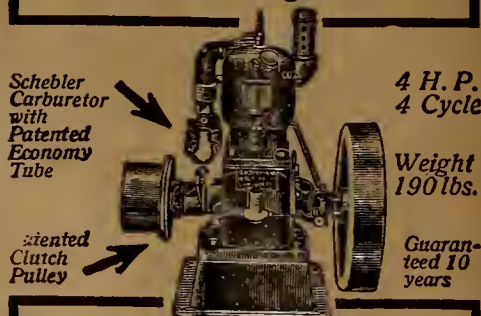
THE first year that I attended the agricultural short course at Madison there was no teaching on agronomy. The farm papers were printing a big lot about the way the Illinois Experiment Station and other experiment stations were improving the corn crop by selection of seed and breeding. The papers also described the ear-to-the-row method of breeding and showed pictures of the best kinds of kernels and the right shape of ear.

My father had been raising one variety of corn, the North Star Golden yellow dent, for nearly twenty-five years and had always been quite careful to save a certain type of corn for seed, so that our corn was quite uniform.

The summer following my first winter at the short course we had set aside an acre of extra good ground from which to select our own seed for the following year. My winter down at the agricultural college had stirred up my interest in improved agriculture, and I thought I would like to try planting a few ears of corn according to the ear-to-the-row method; that is, to plant the seed from each ear in a row separately. I went over our seed-corn and selected fifty ears that looked quite good to me. Then I brought out one of the farm papers that illustrated and described the best type of ear and kernel and started studying the fifty ears.

I had thought we had pretty good corn, but somehow when I started studying it closely there wasn't any of it that seemed very good. Some of the ears were very tapering, or the rows of kernels were crooked, or the butts were enlarged. I kept throwing out the poorest ones till I got down to five ears. By that time none of the five looked very good, but I decided to plant them anyway and see what would happen.

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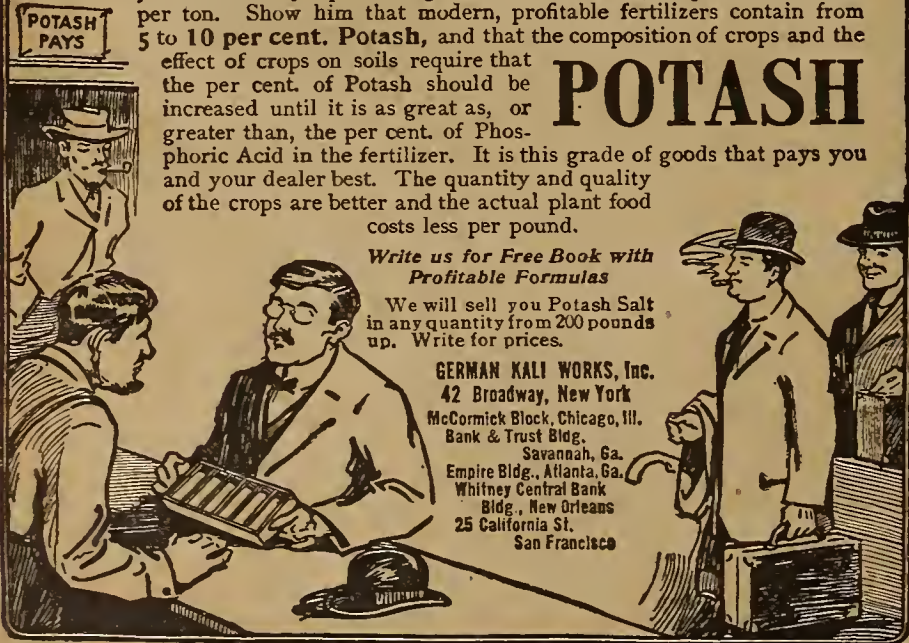
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"BALL BAND"

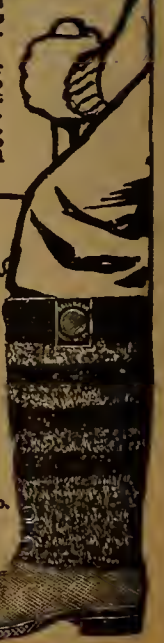
The "Ball-Band" Coon Tail Knit Boot keeps winter workers' feet as warm as toast. This boot is knit—not felt, and is completely shrunken.

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I planted the five ears in five separate rows across the center of the small field reserved for seed-corn. To my surprise the five rows showed considerable differences



We wanted our corn to mature

in manner of growth. By the time of ripening there was a very noticeable difference.

I kept some notes on the growth of the corn during the season, and I quote from those made at cutting-time and later. "The stalks of No. 2 are very badly down. There is quite a tendency to grow two ears on a stalk. Yield, 47½ bushels per acre." "No. 3 stands up well, hardly a stalk down; in marked contrast to No. 2, with nearly all down. The stalks of No. 3 do not have heavy butts either. Yield, 54 bushels."

My father and younger brother were now interested in the corn. We saved a few of the best ears from each row for planting the next year, marking each ear so we would know from which row it came. Of course each row was much crossed up with the pollen from the other rows and the balance of the field, but for at least five years after this first year I could trace characteristics through the descendants.

Our Study of Corn Resulted in Profit

The following winter I went back to Madison to take the second year's work of fourteen weeks at the agricultural college. That winter Prof. R. A. Moore started the first class in corn-judging, and of course I was immensely interested. Our corn has since been adopted as one of the standard pure-bred varieties for Wisconsin by the Wisconsin Agricultural Experiment Association. Professor Moore also used it as one of the parents in the cross which resulted in the Golden Glow variety, now much grown in Wisconsin and adjoining States.

In the spring, after finishing the second winter at the short course, we selected twenty-one ears from the seed saved from the five rows grown the first year, and also two ears from the general seed-supply, for the breeding plot. These ears were weighed and measured and described very carefully, and then planted, each ear separately as



We sought for size and uniformity

before. We kept a record of the growing characteristics of the corn during the season, noted the time of ripening of each row, weighed the corn separately and computed the yield per acre for each ear. From these records we were able to compare the results from each ear, and those that did not come up to a high standard were discarded. The discarded ones included all the progeny of two of the ears planted the first year. Our aim was to produce a heavier yielding variety which would mature a crop on the heavy clay soil of this section and yet would not waste any of the growing season by ripening too early. From the rows that we thought were worthy of keeping we selected the best ears for the next year's breeding, and the balance of the good ears were used in planting our regular field of corn.

One of the things we early found out was that the prettiest ears were not always the best yielders, and we often found it necessary to plant rather rough-looking ears for the sake of holding to our standard of yield.

This breeding work has been carried on for several years. That we have accomplished something is shown by the fact that this variety is almost exclusively grown on the heavy clay soil of a large section of our country. We have never made much out of the sale of the seed because our farm is small, and the growing of flowers has taken the most of our time and attention. About seventy bushels per acre is the largest yield we have had, but a boy of our county secured a yield of one hundred and twenty bushels on one acre in a corn contest in 1911, and over ninety bushels to the acre in 1912, although the latter year was very unfavorable for corn.

The soil and climate of any State varies greatly, and no one variety or strain will suit all conditions. To get maximum results, strains or varieties will have to be developed for the many different sections of the country.

Making Swales Into Corn-Fields

By Raymond C. Nichols

THERE were 480 bushels of corn grown last year on eight acres of tile-drained land by Mont Van Buskirk, a Kansas farmer. The value of the corn, not to mention the feed that was obtained from the stalks, paid for laying the tiles, for cultivating the corn and left a profit besides. In addition, the value of the land was increased about one hundred dollars an acre by the improvement. And—this is quite a contrast too—the land never had produced anything before.

The value of the 480 bushels of corn was \$240, for corn was selling at fifty cents a bushel. The cost of the drainage system was \$125, which left \$115 for cultivating the corn and for profit. The eight acres were in a low swale typical of the waste land found on many of the farms in eastern Kansas and, in fact, in all humid sections. It was not a difficult engineering proposition to drain this swale. A shallow ditch ran through the middle, and water stood on either side of it most of the year.

Through the middle of the wet land, near where the shallow ditch had been, a six-inch line of tile was placed. On either side, on slightly higher ground, was placed a line of four-inch tiles. One of these smaller lines was fifty-five rods long, the other fourteen rods. Two short four-inch laterals were used in addition. The fall was fairly good, so the leveling was an easy proposition; this usually is the case when draining the low swales in that section.

The cost of digging the ditches was thirty-five cents a rod, the tiles being placed three feet deep. This cost included the laying of the tiles and filling of the ditches. The main drain has an intake of rock and gravel at its upper end, to care for the water that comes from the farms above. All the drains empty at one outlet, and this is protected with rods to keep out mice and other small animals that might enter in a dry time.

The Tiled Field Was Early Cultivated

In speaking of the way the field dries after a rain, Mr. Van Buskirk said: "The low, tile-drained portion of the field can be cultivated sooner than the higher portions where the tiling has not been placed." The reason is obvious. The drainage from the low land is almost perfect through the tiles, and the water flows out rapidly. On the higher land it must seep away by percolation through the soil, and the drainage is much slower.

Mr. Van Buskirk has also drained other wet spots on his farm, and has used cement tiles on some of them. He owns a cement-tile-making machine, and has used it quite a good deal. In speaking of the operation of it, he said:

"With cement tiles six inches in diameter and twelve inches long, about two hundred may be made by one man in a day with our machine. The cost of the machine was \$35. We use one part cement to four parts sand. I don't think there is much saved by making cement tiles, over the cost of the clay tiles, after the labor is considered. But when a farmer desires to do the work himself to have employment at odd times it may pay him to make his tiles. I believe well-constructed cement tiles are the equal of clay tiles. Our experience would show that."



Three years ago this field grew only willows and weeds

P. A. is the Pathfinder

Prince Albert is the grand old joy scout. Every day it finds a hundred or so poor tongue-sore pipe smokers, "lost in the woods," smoking peppergrass and smartweed. And P. A. gently leads them straight to the cool-smoke path that the feet of hundreds of thousands of jimmy pipers have beaten into a fine, smooth trail.

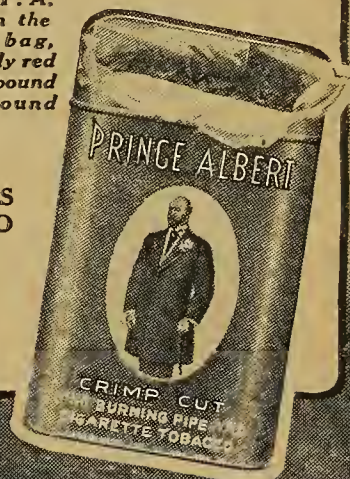
PRINCE ALBERT

the national joy smoke

is perpetually on the warpath against the tongue broilers. It has taken scalps enough to paper a wigwam. Why? Because P. A. can't bite the tongue or parch the throat. The bite is taken out by a patented process.

You can buy P. A. anywhere in the toppy red bag, 5c; in the tidy red tin, 10c; in pound and half-pound humidor.

R. J. REYNOLDS TOBACCO CO.
Winston-Salem, N. C.



Fortune-Telling Post-Cards

A DIFFERENT card for each month in the year, showing the birthstone, the sign of the zodiac and a brief horoscope—witches, owls, crescent moons, black cats and all of the Fortune-Teller's paraphernalia. With these cards you can have loads of fun telling the fortunes of your friends. Tell them their lucky and unlucky months and days. You can tell them more about their characteristics than they know themselves.

All for Six Cents

postage. Send us three two-cent stamps, and in return we will send you, post-paid, a complete set of these new Fortune-Telling Cards. Send at once to
Farm and Fireside Dept. E Springfield, Ohio

Treat Your Shoes With Dri-Foot and Forget Rubbers

You can go out in the wet as often as you please if you treat your shoes two or three times a season with

DRI-FOOT

Waterproofing for Shoes

Keeps the leather soft, pliable, waterproof; makes shoes wear longer; doesn't make them sticky or oily; doesn't change their appearance. For black or tan shoes.

25c full size can

In Canada, 35c

Get a can at the shoe store or of your general store keeper. If they haven't it, send us their names and

25c and we'll supply you.

FITZ CHEMICAL CO.

678 Broad Street Phillipsburg, N. J.





FUN AND MONEY
in Trapping with
VICTOR TRAPS

To Boys or "Grown-Ups":—Write for free booklet on trapping, showing how you can make money before and after school or between "chore" times.

Address **ONEIDA COMMUNITY, Ltd., Oneida, N.Y.**
ND. 14 KENWOOD AVE.

See the **VICTOR** Every Victor Pan is Stamped with a "V"

The Marlin
Model 1897 Repeating Rifle

Shoots all .22 short, .22 long and .22 long-rifle cartridges; excellent for rabbits, squirrels, hawks, crows, foxes and all small game and target work up to 200 yards.

Here's the best-made .22 rifle in the world!

It's a take-down, convenient to carry and clean. The tool steel working parts cannot wear out. Its Ivory Bead and Rocky Mountain sights are the best set ever furnished on any .22. Has lever action—like a big game rifle; has solid top and side ejection for safety and rapid accurate firing. Beautiful case-hardened finish and superb build and balance. Price, round barrel, \$14.50; octagon, \$16.00. Model 1892, similar, but not take-down, prices, \$12.15 up.

Learn more about all Marlin repeaters. Send 3 stamps postage for the 128-page Marlin catalog. **The Marlin Firearms Co.** 141 Willow St., New Haven, Conn.

TAYLOR PAYS MORE

TRAPPERS LET US PAY YOU MORE MONEY FOR FURS

St. Louis is the largest fur market in America and the biggest buyers in the world gather here. P. C. Taylor & Co. is the largest house in St. Louis, receiving more furs from trappers than any other house in the world and our enormous collections are always sold at top prices, which enables us to pay you more.

WE WILL TEACH YOU HOW TO TRAP

Trapping is not hard work if your outfit is complete. You need a few good traps, the best bait and your spare time morning and night. Our big new Supply Catalog and Book on Trapping is ready and you can have a copy FREE if you write today. The book tells you when and where to trap, kind of traps and bait to use, how best to remove and prepare skins, etc.; also contains trapping laws of every state. Price lists, shipping tags, etc., also free. Get busy at once—big money in it. Write for book on trapping today.

F. C. TAYLOR & CO., 375 Fur Exchange Bldg., ST. LOUIS, MO.
AMERICA'S GREATEST FUR HOUSE

90% of All Fine **FURS**

Cash for Raw Furs

Why sell your skins at home when you can send them to us and save all middlemen's profits? New York is the best market in America. We pay cash for hides of Skunks, Minks, Coons, Opossums, Foxes, etc. Thirty years in the business. No commission charged. We stand express charges. Write for price list.

BELT, BUTLER CO., Exporters, 22 East 12th St., New York

TRAPPERS WE BUY FOR CASH

And pay highest prices for Coon, Mink, Skunk, Possum, Muskrat, and all other Furs, Hides and Ginseng. Best facilities in America. Send for Free Price List and Shipping Tags. No commission charged.

ROGERS FUR COMPANY, Dept. 226 St. Louis, Mo.

FURS BIGGS Pays Biggest Prices
Quickest Returns—Honest Grading—No Commissions Deducted

You get the most money for your furs by shipping to "BIGGS" at Kansas City—oldest and largest hide-and-fur house in the Southwest. 32 years square dealing. At any cost we must have more furs to supply our tremendous demand from Russia, England, France, Germany and United States. No commissions charged. We pay 100 cents for every dollar's worth of furs. Nearly half a million satisfied shippers. W. W. Waugh, of Kansas, writes: "I find you to be the squarest house I ever shipped to, and I've tried a good many." That's what thousands say of BIGGS.

Reliable Market Reports—Price lists you can depend on, corrected right up to hour of mailing, sent regularly to every Biggs shipper. Worth big money to you to be on our lists and have this up-to-the-minute market news. Furs held separate on request and sent back at once if our returns are not O. K.

Traps at Factory Cost Traps, guns, supplies, at factory cost. Victor, Newhouse, Oneida, Jump, Stop Thief, and other traps, guns and supplies at factory cost because we want your fur shipments. Biggs Guaranteed Bait you make more money, or we refund their cost. Different scents for all different animals. Trial will prove you can't afford to be without them. Says Wm. Baker, of Okla.: "Set 7 traps and caught 7 skunks, thanks to Biggs' baits." 25c, 50c and \$1.00 package. Beware of imitations.

FREE Fur Price Lists, Latest Market Reports, Catalog of Supplies & Trappers' Guide, Shipping Tags, etc. Write for them today.

E. W. BIGGS & CO. 419 Biggs Bldg., Kansas City, Mo.

Farm Notes

Holds the Twine

By Herman Roots



THIS device is very good for holding twine when tying grain-bags or when shocking fodder.

Make a box ten inches square, leaving the back the highest. Bore a hole (A) to hang on the wall. B are the door hinges, C is the latch, D is small hole in center of top, E is staple and F is an old pocket-knife blade to cut twine. When finished place a ball of twine in the box, draw the end through D, then down to staple, E, then pull the string, and cut the twine any length you want it.

A silo will make the corn-field feed six times as many cattle as will the standing stalks; and probably fifteen head where the cut and husked corn will feed ten. The tests at the experiment farms do not show quite that superiority for the silo, but the experiment feeders do not waste as much of the fodder as the average farm wastes. Silage is fed with practically no waste. It gets the butts of the stalks. And save for a little mold on top it ought not to spoil at all. Silos laugh at bad weather.

What'll Happen Then?

By G. Henry

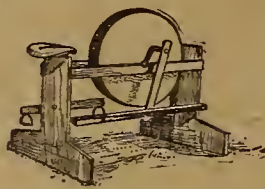
A HARD-HEADED Dutch farmer—he lives in Pennsylvania, and he has shied the dice a few times and lost—once said: "Wall Street is for me to lose money. Wall Street is for the rich man to get richer, and the poor man poorer. Wall Street is a good place for me to keep away from."

"Let the rich rob the rich—and the poor laugh at the rich as they rob each other. After a while two or three rich men will get it all, and then—"

Put the Pedals On

By Walter Boeder

THE grindstone I had was one of the old-fashioned kind, having only one short crank. I wanted to use a double treadle, so I made the attachment, as shown in the sketch. A seat was attached to the top of the front support. This scheme works to perfection.



America's garbage-barrels catch enough food to sustain the Japanese. The conservationists may well look to the garbage-can as one of the greatest drains on the national resources.

Judgment in Advertising

By Wm. H. Hamby

IN FARM advertising, like all other advertising, the first principle is to have the goods. It doesn't pay to advertise a poor article as a good one. The next thing is to reach the people who are likely to want it and who are able to pay for it. In advertising it is best to give a little description of the article. Say something about it to make people want it. "Fine black cherries, uniformly sound and delicious" is worth a great deal more than "Cherries for sale." "Some particularly choice Jonathan apples" is worth ten times more than "Apples for sale."

In advertising to reach a certain class of customers, describe the article in the way they will like it; that is, describe the things about the article that will appeal to that class. For instance, the man who sold the cow to the banker was wise in mentioning that she was a beautiful cow. He knew that a town man with a nice yard and a nice barn would want a good-looking animal. Use a little judgment in advertising, and it is almost sure to make you money.

Mend Your Own Chain

By Paul R. Strain

AN EXCELLENT emergency as well as lasting repair may be made on a small-link log-chain, such as is most commonly used nowadays, by bolting it together at the point where broken. Casting away the broken link, the two stray ends are laid together, links overlapping, and a short, suitable-sized bolt run through them and then screwed tight. Be sure that the bolt used is of much heavier rod iron than the iron from which the links were made, as it will be subjected to greater strain. Use washers on bolt if either head or nut happens to be too small to stay in place.

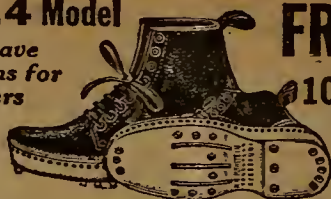
This repair done on a thrashing-machine outfit in an emergency has stood the heaviest pulls of the engine on the chain without giving.

"World's Best Workshoe"

1914 Model **FREE**

Will Save Millions for Workers

By Parcels Post



10-Day Try-on

I Just Spent \$50,000 To Improve My "Steels"

I know and every wearer of my steels knows they always have been the "World's Best Workshoe"—the best shoe for every farmer, mechanic, laborer, miner, hunter—man or boy. Thousands have been pleased—you will be more than pleased with my new, improved, better-fitting, better-feeling, better service 1914 Model "Steels".

Leather work shoes are heavy, clumsy, shapeless, as compared with my "steels". My "steels" never get sloppy or out of shape. You pay less for my "steels"—then they outwear 3 to 6 pairs of leather shoes and save \$10 to \$20 on your yearly shoe bills.

Health—Comfort—Economy

My "steels" are good health shoes. They are waterproof. Stop colds, pneumonia, rheumatism and other "wet-foot" troubles. Stop corns, bunions, callouses, blisters, flat-foot, broken arch and the like. My "steels" are firm, restful, light, damp-proof. They keep your feet in best condition. I can and will prove all this to your satisfaction. My "steels" are an absolute necessity to any out-door man.

Write For Free Book

It describes my "Steels"—tells why they are lighter, better, more comfortable, safe and economical for you than any other work-shoe—why they outwear 3 to 6 pairs of the best all-leather shoes—why "Hankstein's Steels" save your feet, your health, your money.

H. M. RUTHSTEIN, The Steel Shoe Man, 131 Racine St., Racine, Wis.

\$35.00 A WEEK

START in business for yourself and make \$35.00 to \$50.00 a week handling our big, modern Line of Sanitary Medicines, Spices, Extracts, Stock Remedies, etc.

No Capital Needed—No Experience Necessary

Our line is the easiest to sell, gives the best satisfaction to customers, pays the biggest profits. Our free booklets explain why. Write today for full particulars.

FURST-MCNESS COMPANY



YOUR CORRY FUR LIST IS READY

This is the season you should have Corry's fur list. Furs are high. All sorts of unreliable buyers are after them. You should be posted. Send for Corry's prices. With them Corry sends letters from shippers in every State—maybe your own neighbor—who will tell you how Corry paid them more than any other house. Write today before you forget. A postal will do it. No matter whose prices you have now GET CORRY'S BEFORE YOU SELL. It means more \$ \$ \$ for you. **CORRY HIDE & FUR CO., Box 2772, Corry, Pa.**

FARM FENCE

11 1/2 cts. a rod

17 1/2 cts. a rod for 26 in. high fence; 17 1/2 cts. a rod for 47 in. high stock fence; 2 1/2 cts. a rod for a 60-inch heavy poultry fence. Sold direct to the farmer on 30 Days Free Trial. Special barbed wire, 80 rod spool, \$1.55. Catalog free.

INTERLOCKING FENCE CO.
BOX 21 MORTON, ILLINOIS.

AGENTS A BRAND NEW LIGHTER

Novel watch-shaped lighter. Operated with one hand; gives an instantaneous light every time. No electricity, no battery, no wires, non-explosive; goes away with matches. Lights your pipe, cigar, cigarette, gas jet, etc. Dandy thing for the end of your chain. Tremendous seller. Write quick for wholesale terms and price.

D. F. Brandt Lighter Co., 145 Duane St., N. Y.

WE SELL GUNS AND TRAPS AT LOW PRICES | **WE BUY FURS AND HIDES PAY HIGH PRICES**

Send for catalog No. 30. **NORTHWESTERN HIDE AND FUR COMPANY, Minneapolis, Minn.**

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Ants and Birds—Economists

By R. B. Ewing



I RECENTLY saw a mother flicker work industriously about ant-holes until she accumulated an amount of ants she thought worth while. Then she thrust them into the open mouth of her lusty son fully as large as herself. His eager cries for more were repressed by some lively pecks on his red head. The operation of feeding followed by chastisement occurred several times within a half-hour. I wondered when the youngster would learn to hunt up his own ants. I would like very much to see the transition from dependence to self-support. Will he learn by imitation?

The ants are very numerous in our Ohio gravelly soil. To me they seem the most hopeful agent for the restoration of our farms swept bare by the recent floods. Every day they bring up much of the fine soil mingled with the gravel and deposit it on top. The gravel inevitably settles down. While some of the gravel does slowly disintegrate, the process as a surface-soil producer is far slower than the action of the ants.

Perhaps in most soils the angleworm is more beneficial than the ant, but certainly not in the gravelly soils.

The mother flicker was probably not doing any good by gathering the ants, but the ants were so numerous that their number was not much diminished. The flicker was of the large yellow-bellied variety, with a red cap and black necktie. I examined some of the ant-holes where it had been at work and found it had bored out a conical hole about an inch and a half deep. Probably its sticky, horny tongue reached down the hole quite a way. Does it eat ants because it has the right sort of a bill and tongue for the job?

A German engineer has published an article in which he proves that where the wind movement is sufficient—as it is in a large part of the United States—electricity can be generated by wind-power at a cost of one cent to one and one-half cents a kilowatt hour, including interest and depreciation. This substantiates articles published in the past in this paper. The cost mentioned is only a fraction of the price usually charged by power companies.

The Baneful Rush on the Farm

By Warren F. Wilcox

FARM life is often spoken of as the simple life, but, as such, life on the average farm is basely slandered. Some farm managers seem to think they will never wear out, that their hired hands are machines and everybody else connected with the establishment perpetual-motion automotons.

It doesn't pay altogether to rush too much, to work too long hours, to ignore the Sunday rest-day. I have seen it tried out and noticed the results. Here are the cases of two men in York State, neighbors. On one farm, at four or four-thirty every afternoon during the summer and autumn, a boy or man was sent for the cows. By five o'clock all hands were milking. By six the milking was practically done so that at best there were not more than one or two cows apiece after supper. There was no evening work. On the adjoining farm the haying help or harvesting hands worked in the field until seven o'clock. Then they milked until nine or half-past. If by chance they happened to get through milking before dark, the boss would have them get another load of hay, and often after I have been in bed I have heard them out in the field.

Start Early, but Stop Early

These men almost met themselves getting up when they went to bed. On both farms early rising was in vogue. I do not mind that. I am always in favor of getting the day's work started early, but I do say, "Quit when the day is done." So many farmers seem to be slave-drivers. It's hurry with the hay, for it looks like rain, and a day's work is done in half a day. It's hurry with this and that. Always a pinch somewhere to get a task finished in half the time it ought to take.

And then Sunday work. Man, beast and machine need one day's rest in seven. On the aforesaid farms Sunday work was the rule on the "drive" farm. On the other nothing but the necessary chores were performed on Sunday. What was the result? Hired men could not be kept on the "drive" farm; neither could the boys. Finally the farm was lost through the mortgage. The other prospered, no trouble to keep hired men, the boys liked farming, success was written all over the place. Rush, push, hustle, bustle, long hours, Sunday work and all did not avail in the one case, for the boss lost out.

Some farmers think a hired man must be kept going every minute or he doesn't earn his money. I remember once working for a "drive" farmer. One morning he

said, "Harness the teams." I knew he had work planned that did not need any teams. But I cared for and harnessed two teams at four in the morning, then breakfast, and we went to the field to shock grain. At night, after work and tired to death, I was ordered, "Unharness the horses." Now he had me harness and unharness just to keep me busy, for he knew what we were going to do.

About six o'clock at night I like to knock off and go in and eat. So does every farm worker after a day's toil. Likewise at noon I like to eat. I don't like to wait till one o'clock. Hired men are human. The farmer who drives things with such speed will some day find himself worn out from misused muscular and nervous energy. Go a little slower, and don't wear out your mind and body. It doesn't pay.

At a steam-tractor test in Canada the thirty-two-horsepower tractor at one operation plowed, cultivated and sowed to flax sixteen acres in a day at a cost of \$1.87 per acre. In the next field the same work was done at the same time by horse-power at a cost of \$6.50 an acre. The engine burned coal, but it plowed twenty-four acres in a day at a cost of eighty-eight cents per acre, using flax-straw as fuel.

A Preacher Studies Finances

[CONTINUED FROM PAGE 5]

the average amount of canned vegetables and fish used on the farm, also the amount of package cookies and crackers. There is an opportunity to save from two to five cents a package on these articles.

I have not included in the above the amount that could be saved on the feed purchased for the dairy and for the poultry. None of the farmers in our community know just how much feed they purchase for their poultry and for their dairy. They buy it as needed and seemingly keep no record. If, however, they fed the same amount of gluten meal each day in the year as they feed in the winter the result would be as follows: Each cow consumes about four pounds of gluten meal a day. This is about fifteen hundred pounds a year. This is purchased in small quantities. If the farmers would combine and purchase in large quantities there would be a saving of about \$2.25 a cow, a saving of \$33.75 if fifteen cows are kept on the farm. Each farmer purchases commercial chicken-feed in small amounts. They pay \$2.25 a hundred for it. It can be purchased for \$1.50 a hundred, delivered at our railroad station. This is a saving of seventy-five cents a hundred. If each farmer feeds only one sack a week he would save \$39 in a year.

Let us consider the losses in condensed form. Here they are for the average family for a year:

Loss of 2c per dozen due to careless methods of gathering and selling eggs	\$26.00
Loss in winter eggs because of improper care	70.00
Loss of 2c per pound by selling poultry on local market instead of direct	5.00
Loss due to purchases of poultry feed in small amounts	39.00
Loss because of poor farm seeds....	60.00
Loss due to buying groceries in small quantities	53.25
Loss due to buying meats in small quantities	21.90
Total	\$275.15

In addition to this loss, the average dairy farmer in our community sustains additional losses, previously explained, as follows:

By failure to grow alfalfa	\$324.00
Selling milk instead of cream.....	256.05
Hauling expense of milk over cream	78.00
Extra cost of cattle-feed by failure to buy in large quantities	33.75

Total

This brings the total loss of the average dairy farmer to \$966.95 a year. The total loss to the entire community, according to my calculations, is \$44,809 annually, due solely to poor farming methods practised.

When I ask the farmers for money for better roads, better schools and better churches they say that they are not able to support them. Nearly \$45,000 a year would add materially to the funds needed to build good roads, a township school and a modern church. What is true of our community is doubtless true of many other communities in the United States.

Our farmers are far in advance of their fathers, but they do not yet realize the opportunities knocking at their doors. They need to "stop, look and listen" in order that they may increase their efficiency in producing and saving, for by so doing they can create a better community in which to live and rear their families.

Fruits have been known to absorb bad flavors from tainted air. Grapes will sometimes absorb enough chemicals from the air in the vicinity of chemical works to spoil the flavor of the juice or wine.



WONDERFUL GALVANIZED Steel Roofing OFFER

Fire, Water and Lightning Resistant. Practically Indestructible.

Special Offer: A fortunate purchase enabled us to secure a limited amount of brand new, high grade corrugated iron and galvanized steel roofing, some of which we are offering, while it lasts, for as low as \$1.25 a square of 100 sq. ft., f. o. b. cars, Chicago. This is only one example of how much we can save you on all your roofing purchases. Never before in the history of the roofing business has such a remarkable money-saving roofing offer been made. It doesn't make a bit of difference what kind or make of roofing you have in mind to buy—corrugated, iron, galvanized steel or ready roofing, rubber surfaced, pebble, marble, flint or gravel coated—we can supply your every need with just the kind you want. Write today for—

\$1.25

Per 100 Sq. Ft.

Buys Best

STEEL ROOFING

and let us prove that we can save you big money on every kind of Roofing, Siding and Ceiling. We can furnish you the material necessary for re-roofing your house, barn, granary, church, residence, garage or poultry house. We can also furnish you the siding, conductor pipe, eaves trough, and everything needed. METAL ROOFINGS ARE BEST and cheapest in the long run, easiest to lay, longest life, non-absorbent; fire and lightning proof; cooler in summer, warmer in winter; do not taint rain water; with ordinary care will last a lifetime.

New, Heavy, Galvanized Roofing 2 3/4c per Sq. Ft.

Just another example of how hard we've smashed roofing prices this season. Never before and probably never again will you be able to buy such roofing at this price.

We Save You Money

Now is the time to send in your order for this roofing—don't delay it a single day. Even if you do not intend to use it for several months to come, send your order in now with a reasonable deposit which will protect you in your purchase, and the material will be shipped when you are ready to use it. Metal Roofings are best and cheapest in the long run, easiest to lay, longest life, non-absorbent; fire and lightning proof, cooler in summer, warmer in winter; won't taint water; with ordinary care lasts a lifetime.

Chicago House Wrecking Co.

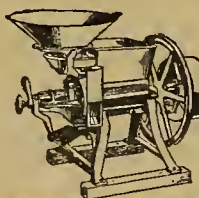
Prominently known everywhere to the public for 20 years as the great "Price Wreckers" and now owned by the Harris Bros. Co., have decided that their best interests require that the name of the principal owners of the company be more prominently brought to the public's notice. There is no change in our business, except that the four Harris Bros. will, in the future, advertise and sell their goods, under the name of the Harris Bros. Company, instead of the Chicago House Wrecking Co.

Write Today For Free Samples—and Freight

REMEMBER, no matter what kind of roofing you are contemplating buying—corrugated steel or ready roofing—it will pay you to hold off a few days until you first get our free samples and freight prepaid prices. Just drop us a postal. We will absolutely prove to you that, quality for quality, we are underselling all competition by a wide margin. You run no risk in sending us your order. Our binding guarantee, backed by this \$10,000,000 Company fully protects you. Write for free samples today.

HARRIS BROS. CO., 35th & Iron Sts., Dept. EN-28 Chicago

Prepaid Prices



Quaker City Mills' Success Measured by Actual Deeds

The big value we are able to offer you in our 23 Styles—Hand Power to 20 H.P.—for satisfactorily grinding anything grindable, comes through new economies and large volume of business.

By buying direct from us, thereby eliminating middlemen's profits, you save considerable money. Our mills are built for work—real work.

Sold On 10 Days' Trial—We Pay the Freight

Whether you want to grind grain, separate or mixed, husks, ear or shelled corn, coarse or fine meal, a Quaker City Mill will do it to the acme of perfection.

Write for catalog giving complete information, also book of bargains in labor-saving farm machinery.

THE A. W. STRAUB COMPANY

Dept. B, 3735 Filbert St., Philadelphia, Pa. Dept. X, 3703 So. Ashland Ave., Chicago, Ill.

Get a Watch and Fob

Boys: Here is a chance to obtain a handsome and useful watch and a fine leather fob with a gilt metal charm. FARM AND FIRESIDE guarantees you satisfaction.

DESCRIPTION: This watch has a handsome nickel case, with open face. It is a stem-wind and a stem-set, just like other high-priced watches. It has a close-fitted snap back. It is only 3/8 inch in thickness. It is a perfect timekeeper, tested and regulated before leaving the factory. It is engraved front and back, and is a watch of which anyone would be proud.

The Fob is of handsome black leather with a polished buckle, like illustration, with a rich gilt charm handsomely engraved.

Act Quick

How to Get the Watch

You can get this dandy watch and fob very easily. Write a postal-card to the Watch Man. Tell him you want to get this watch and fob without spending one penny. He will be glad to help you get your watch. This is a chance you must not overlook.

Thousands of delighted boys have secured their watches this way with the help of the Watch Man. You can do it, too. Any boy that really wants one can easily get this fine watch. But how will the Watch Man know about you if you don't tell him?

Write a Postal To-Day to THE WATCH MAN

FARM AND FIRESIDE, Springfield, Ohio



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"To my great surprise I saw quite a change in my nerves in about 10 days. That was a year ago and now my nerves are steady and I don't have those bilious sick headaches which I regularly had while drinking coffee.

"Postum seems to have body-building properties and leaves the head clear. And I do not have the bad taste in my mouth when I get up mornings. When Postum is boiled good and strong, it is far better in taste than coffee. My advice to coffee drinkers is to try Postum and be convinced."

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Poultry-Raising

From Wool to Poultry

By John E. Taylor



Mr. Adams

AFTER twenty-two years as an employee in a woolen mill F. E. Adams of Maine, with three acres of land, is making the poultry business pay.

Mr. Adams wanted a change, and, being greatly interested in poultry, he started that business in 1910, building a hen-house one hundred and ten feet long and twenty feet wide. This house contains five pens, each twenty feet square, which will hold one hundred hens each. The ten feet in the center is used for a granary. The house has no windows except the one in the granary, drop curtains of heavy sheeting being used instead of glass. These curtains are hinged at the top and operated by pulleys. Curtains are placed in front of the roosts in the same way.

The house has no floor. Mr. Adams considers that an unnecessary expense where the ground is dry. In the winter the floor is covered with hay and straw to a depth of not less than eight to ten inches. The house is supplied with running water. The feeding-troughs, runs, brooders and coops are all constructed for efficiency.

The Rocks and Reds Compared

The first spring Mr. Adams raised 1,000 chickens, out of which were 480 pullets which he wintered. These were of the Barred Plymouth Rock and Rhode Island Red breeds, of as fine a strain as could be obtained. Mr. Adams firmly believes that blood tells in hens just as much as in horses. Each of these 480 hens netted him better than \$1.25 per year.

Both breeds commenced to lay at the age of five months and twenty-one days. Wishing to test which breed was bringing him the most money, Mr. Adams placed eighty-two Barred Rocks in one pen and eighty-two Rhode Island Reds in another, gave each flock the same care, fed each practically the same, and kept an accurate account of eggs laid by each flock, from November 11, 1910, to November 11, 1911, as follows:

	Barred Rocks	Rhode Island Reds
November	197	138
December	884	968
January	917	971
February	1,107	848
March	1,818	1,238
April	1,910	1,438
May	1,644	1,401
June	1,384	1,083
July	1,205	1,008
August	1,383	1,112
September	1,046	992
October	652	710
November	100	176
Total	14,247	12,083

Barred Rocks averaged 173 each per year. Rhode Island averaged 147 each per year. So, while Mr. Adams does not by any means condemn the Rhode Island Reds, of course, for him he will take the Barred Rocks every time.

He feeds practically the Maine Experiment Farm rations. He believes in lots of

bran for young chicks. He commences feeding it to them at the age of two days. For winter green food he uses lots of clover-hay, and if it is the second crop so much the better, and turnips fed whole.

This spring he had seven incubators going at one time, containing one thousand eggs. As soon as the chicks are hatched they are put into the lampless brooders, until they are large enough to be placed in a pen which he has for them in his stable chamber with a large double window. When they are large enough they are placed in the coops in the hen-yard. The brooders are kept with them as long as they need a mother. Each flock is kept separate the year around. The broilers are brought up to the two-pound mark as quickly as possible and shipped alive to Boston, which Mr. Adams considers the most profitable way to dispose of them.

A Small Run and a Large One

In June he was getting sixty eggs per day from a flock of eighty hens. He has three acres of stony ground not good for much else, which makes a first-class hen-yard. He prefers a small run to a large one, and says that the more plum and apple trees you have in your poultry-yard, the better for the trees. The hens need the shade, and the trees need the dressing. Two apple-trees which before had been considered practically worthless yielded nine bushels after the land was converted into a hen-



The Adams home, earned—



—from the poultry-shed

yard. The dressing from each hen he considers worth fifty cents, and it should be kept in barrels under cover to keep it dry. For this purpose he has erected a cheap house.

The chicks hatched in the spring were laying in November. During the season he shipped a large number of broilers.

Sparrows Spread Disease

By J. A. Leach

RECENT observations made by a few of our Texas poultrymen would point to the fact that the English sparrow is to blame for many of our poultry diseases. They are mite and lice incubators. During the time they are feeding their young they will visit every poultry-yard for a mile or more, thus scattering any kind of disease that may be in the neighborhood and dropping lice and mites in poultry-yards.

Kill every one that comes about the premises, and bury it.

A pair of sparrows when feeding young will destroy more garden-truck than one hundred cutworms.

Poultry Manure Wins Out

By A. E. Vandervort

DURING the past season the writer made experiments of top-dressing meadows with manure of various kinds and noting the increase in yield in each instance.

It is proper to state at this point that the plots used in the following experiments were, before treatment, as nearly alike in every respect as possible, and throughout the season the conditions for each plot were the same, with the exception of the top-dressing used.

One eighth of an acre of the average meadow, seeded to timothy, red and alsike clover, from which hay had been made the first time the year before, and where no top-dressing of any kind was applied, yielded 235 pounds of hay, or at the rate of 1.880 pounds to the acre, or .94 of a ton per acre.

A piece of similar meadow-land was top-dressed with manure from the horse-stable, spread lightly as possible by hand. From this plot one eighth of an acre gave a yield of 380 pounds of well-cured hay, which equals 3,040 pounds per acre, or 1.52 tons. This shows that an application of horse-manure produced an increase of .58 of a ton per acre over the plot that received no top-dressing.

On another similar plot a top-dressing of cow-manure from the stable was applied, with the result that one eighth of an acre gave a yield of 545 pounds, which equals 4,360 pounds per acre, or 2.18 tons. This shows for cow-manure an increase of 1.24 tons per acre.

In another case a similar area of meadow was top-dressed with sheep-manure, which produced 4,840 pounds, or 2.42 tons per acre, a gain of 1.48 tons.

Lastly, poultry-droppings were used as a top-dressing, resulting in a yield from the one-eighth acre of 7,800 pounds, or 3.90 tons per acre. This gives the remarkable gain of 2.96 tons per acre for a light application of poultry-droppings as a top-dressing.

The experiments show the value of poultry-droppings as a top-dressing to hay-meadows. But observation showed that the fertilizer could have been more economically applied.

The character of the crop in this case, and its condition when cut, suggested the application of too much fertilizer; in other words, it should have been more thinly applied.

For next year's application we shall mix the poultry-droppings with the cleanings from the horse-stable in proportions of two parts horse-manure to one part poultry-droppings and believe better results can be obtained in this way.

Three Eggs a Day—If

WHEN fed an exclusive wheat diet a laying hen could lay three eggs a day so far as the fat requirements of the eggs are concerned; but when fed wheat and nothing else she can lay only one egg in two and one-half days, or 146 eggs a year. In other words, the wheat furnishes three times as much fat as the hen requires to lay an egg a day, and furnishes less than half the protein (the most abundant element in eggs). Here is where the importance of the knowledge of a balanced ration comes in.

A Double-Purpose House

By Fred Kohler

HERE are three buildings in a row. Two of them take care of my poultry. The west building with a cupola is my roosting and setting house. We use the setting hen for our incubator. The middle building is our scratching-house, where the laying hens get their exercise in winter. It has three windows, each four by six feet. A great



One building for several uses

many poultrymen think that the open front is best. But it is not here in Kansas, where there is much wind.

Take, for example, a strong, cold wind like we have sometimes for two to four weeks at a time. If we had an open front my chickens would freeze. It would not make much difference if the sun was shining.

During the summer-time I use the scratching-house for my little chickens, as my laying hens do not need it then. By using the scratching-house for the little chickens, they do not make half the trouble they would if they were in a small coop where the strong wind and rains could affect them. The secret of raising little chickens is exercise.

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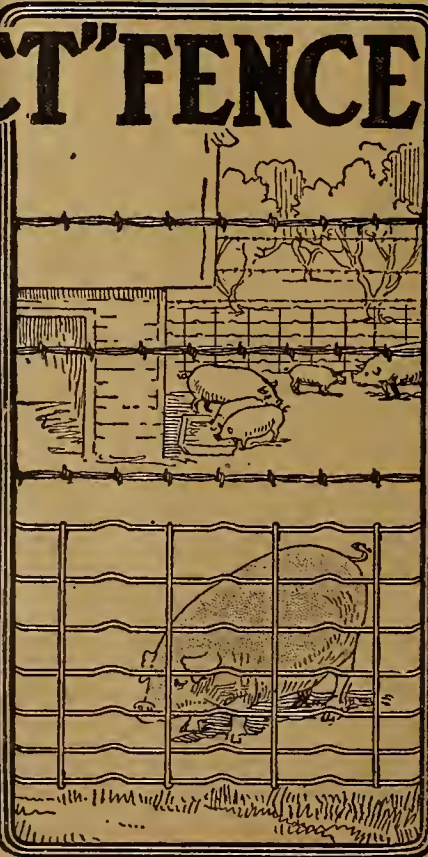
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The FARMERS' LOBBY.

THE other day a despatch from the extreme north of Alaska told a rather languid world that a Russian exploration expedition had discovered a new continent or an island big enough to be regarded as a minor continent. It was inside the Arctic Circle, capable of producing excellent ice, polar bears, maybe some walrus and a very superior article of aurora borealis.

We read about it, yawned and went on to a more interesting story. Who wants a continent, more or less, in the Arctic Circle? But suppose—just suppose—that somebody should discover a continent right in the richest part of the tropics, capable of being inhabited by white people from the Temperate Zone, rich and productive as tropical valleys and plateaus are, made up of magnificent forests, mighty rivers, metal and mineral laden mountains, broad plains on which anything from bananas to good beef could be raised? That would be quite an addition to this old world's possibilities as a place to live in, wouldn't it?

So you may be interested to know that a great American enterprise has started out to do just about this. It is going to reclaim for the habitation of white men the vast areas of the tropics which white men have so long regarded as impossible.

A Country That Should be Sanitary

Think of the Amazon or the Congo valleys! Either of them, if it could be subdued and set at useful production with all the luxuriant richness of never-ending tropic summer and inexhaustible soils, would support all the people now in the world, and not begin to exhaust its possibilities. Yet to-day neither of them is of any real use to civilization or to the world.

Why? It isn't heat. The hottest temperatures in the world have been recorded, not in the Sahara or the interiors of India or Arabia or South America, not in the tropics at all, but right here in our own United States! In Arizona the thermometer may run up to 120° and 130° any day in summer. It is the superabundance of insect and parasitical life in the tropics, plus the difficulty of enforcing sanitary conditions, that constitute the difficulties for white people living there.

On the side of sanitation, white men in India, the Philippines, Cuba, Brazil, have demonstrated that the obstacles are not insuperable. Our canal-builders in Panama took the most unhealthy region in the known world—that was the reputation of the Zone before Doctor Gorgas got it!—and converted it in a few years into just about the healthiest. They drove out the mosquito, put an end to malaria, made typhoid impossible. Yellow fever is unknown there; it used to exterminate whole populations. The average death rate in the Canal Zone is to-day statistically proved to be lower than in most American cities!

But there is one pest of the tropics that ordinary sanitary methods will not reach. It is the hookworm. Only in very recent years has it been realized just what a world-wide calamity the hookworm was, nor how easily it could be gotten rid of. The whole tropical belt of the world is infested by it. Many experts in its study, and in the study of ancient civilizations that tried to establish themselves and survive in the tropics, have gone so far as to say that the hookworm is the chief reason why the tropics have been the habitat of savagery and ignorance.

An Awful Disease, but a Cure is at Hand!

The International Health Commission is undertaking to free the tropics. I believe it is the most tremendous project that a single benevolence ever undertook. Mr. Rockefeller gave \$100,000,000 to endow the Rockefeller Foundation, and the International Health Commission is one of the activities of this Foundation. With the Rockefeller money behind it, and with a record of accomplishment in the Southern States of our country, the International Health Commission is now getting fairly started in the tremendous task of carrying on a world-wide war against the hookworm. No matter where he is, there the commission will go after him.

The hookworm is an intestinal parasite that, once getting into the human system, lodges itself in the intestines and becomes literally a blood-sucker. It

A Parasite That Hides a Continent

By Judson C. Welliver

saps the vitality, the energy, the blood, flesh and at last the life of the victim. A good deal was known about the parasite and the harm it did for years before a remedy was found.

Then it was discovered that a dose of thymol, followed by a dose of Epsom salts, would clear the parasites out of the system. In most cases a single treatment has sufficed; sometimes, however, more are needed. It would be possible to treat and cure the average patient, the world over, at an expense of ten cents for the medicine! The real cost is in getting to him, making him believe your story and inducing him to take the dose.

We all know now that hookworm was responsible for most of the misery, ailments, invalidism, stunted bodies and mentalities among the "poor white" unfortunates in our own South. That element of population is disappearing at a well-nigh unbelievable rate, simply because the remedies for hookworm have been carried to them.

The worm gets into the system from the ground; through the bare feet of people who go barefooted; from the earth, in the cases of people who have the clay-eating habit. They are cast out of the system in the excreta of people afflicted with them, to be gathered up again through the feet of other people who happen about places where insanitation is such as to help spread them. It is therefore necessary, after a community is treated and cured, to equip it with such sanitary devices as will protect it from further infection. That means that sanitary privies must be provided and used. They are not expensive, but yet in experience the commission authorities find that the very hardest part of their work is to get people to provide these. It is at this point, indeed, that recourse most often must be had to the authority of the co-operating governmental power—the state board of health, the county commissioners, and the like.

Do You Want an Index?

VOLUME XXXVI. has just closed. An index has been prepared for this volume. It will tell you exactly where to look in the various numbers for something you remember having read, or it will point to items you overlooked. It's yours for the asking. Please send a self-addressed, stamped envelope if you desire the index. Mail your request to Index Editor, Farm and Fireside, Springfield, Ohio

In our country the hookworm infection extends as far north as southern Maryland and Kentucky. Within this region, with the Gulf on the south, the Potomac and Ohio on the north, within the last three and one-half years, just about half a million people have been found with the disease, have been treated and cured! Imagine what it means to restore to usefulness, health, happiness, to life itself, that many human beings in so short a time.

In 326 counties of the South infection surveys have been made for hookworm in less than four years. The survey is based on microscopic examination of not less than two hundred country children taken at random throughout the county. The infection is found to exist in from one to ninety per cent. of the people examined!

In the seven States of Georgia, Kentucky, Mississippi, North Carolina, Tennessee, Texas and Virginia a total of 46,794 people were examined in the course of these surveys, and of these 22,782 were found with hookworm infection.

The report of Dr. John A. Farrell, director of the American campaign, whose headquarters are in Washington, gives some striking figures. The health authorities in co-operation with the Commission have examined 665,581 cases, and in addition private physicians have reported treatment of 162,305 more; out of these, as I learned, 491,000 were actually treated. It is said that there is no record of a case in which thymol and salts have failed to effect a cure. It might take more than one dose, and the cure might not be permanent if the opportunity for reinfection were at hand and the patient failed to protect himself from it. But, nonetheless, a cure would be effected.

In many localities, Doctor Farrell told me, eighty to one hundred per cent. of the school children are found affected. Such children are likely to advance

in their studies about half as fast as uninfected children. The progress these children make when relieved of the horrible incubus is often past belief.

In many localities entire families have been swept away entirely as a direct result of the disease. Not only does the hookworm prove a very constant cause of death, but it weakens the system so that other ailments produce death with almost certainty. Pneumonia, consumption and typhoid are especially virulent and fatal when they attack victims of hookworm.

The effect of the parasite on the children's intellectual processes may be judged from the statement that the carefully prepared statistics of the subject show that in heavily infected districts the children will be found, by the school authorities, in routine examinations, to be about three times as backward as in sections comparatively free from the infection.

These parasites germinate from an egg, or ovum, which will not hatch until it has been expelled from the intestines with the excreta. For a person to become infected it is necessary that the larvæ, or worms, developed from these eggs shall find entrance to the intestinal canal. This is often done by eating food contaminated by human excreta. In the case of hookworms, however, the infection usually comes through the skin and then on into the intestines.

How the Disease is so Easily Spread

The infection spreads just about in proportion as there is carelessness in caring for night-soil. In cities and towns where the people use water and sewerage systems intestinal infection is very rare. Like typhoid, hookworm is an affliction that peculiarly belongs to the open country. In the sections where hookworm is most prevalent it is found also that as high as fifty per cent. of the families do not have even the poorest of open closets; in such communities it has been found that seventy-five per cent. of the men and boys do not use any closet at all. The state boards of health in the southern group of States where this campaign is being carried on have been conducting a rural sanitary survey. It aims to learn what are the actual conditions at rural homes.

In this survey a total of 103,346 farm homes have been inspected. Of these 50,637 have no privies; that is, almost fifty per cent. In such a locality, if the infection once gets started, it requires the utmost precaution to avoid getting it; the chances are decidedly in favor of infection. Moreover, it is certain to be carried about from place to place by everybody who has the infection.

The country school is the very worst of all instruments for infection. Here gather the children from a considerable extent of countryside; if there is hookworm anywhere in the whole section it will be brought. Sanitary facilities are very commonly the very worst possible. The ground about the school becomes infected with the parasite; the children playing there catch it; they carry it home, and presently a whole school district is infected.

Everybody Boost for Better Rural Sanitation

This is actual experience; not in one, but in very many districts, as shown by the survey that has been made.

It is a disheartening story, as these men tell it who have been in the field and studied actual conditions. Yet it is closely parallel to the other story, of how the germ of typhoid is spread by reason of bad country sanitation.

From every agency where they deal in such things, from the officers of the Public Health Service, from the Sanitary Commission people, the state boards of health, the city health authorities, the Department of Agriculture authorities, I get that same refrain: the health of the Nation, it is now realized, very largely depends on establishing better rural sanitary conditions. It would not be expensive, it would add marvelously to the self-respect of the people who took the trouble, and it would protect not only them, but their neighbors. There is need, of course, for community effort, for legislative authority, for officials with real authority; but all those would come in reasonable time if a sanitary revival could be started among the people themselves. May it soon come!



The Burden of Yesterday

By Adelaide Stedman

Illustrated by R. Emmett Owen



Synopsis of Preceding Chapters

A girl appears mysteriously in Drake's office and introduces herself as a friend of friends of his, and borrows ten dollars. Drake meets her again at the commencement exercises at a school where she is teaching, and learns that her name is Faith Hamilton and that she is greatly loved by Ernestine Cumnock, one of the graduating pupils, whose father is his friend. A house-party is arranged to take place at Mr. Cumnock's house, at which they will all shortly meet. Drake has a young secretary, Robert Lewis, whom, as a child, he has taken from the Children's Court. This boy and Ernestine Cumnock meet in Drake's office, which is in the Singer Building, New York City, and go together to the observation tower. Robert is fascinated by Ernestine and greatly touched by a remark of hers which leads him to infer—incorrectly—that she knows his history and disregards it.

Chapter VI.

ONE morning ten days after their arrival at Mr. Cumnock's house Ernestine, waving a telegram, came running across the lawn to where Faith was sitting. "Mr. Drake's coming in half an hour. This message was delayed."

"Erny dear," Faith remarked as an excuse for keeping her eyes lowered and avoiding Ernestine's mischievous grin, "your petticoat shows."

"Oh, bother my petticoat," the younger girl flounced, dropping at Faith's feet. "There are no boys around."

"It's a wonder," Faith laughed. "You have the place littered with them."

"Don't you talk. At the Hazleton's dance last night I watched you, Miss Modesty."

"I did have a glorious time. You don't know how wonderful it is for me to be out among people."

Faith was tasting the first power of her girlhood, and it was intoxicatingly sweet.

"Oh, Erny, I do so appreciate being here."

Her hostess shook her black curls. "I've always been insulted that you let me coax for three months, and then gave in to Dad in three minutes."

"He showed me that I ought to come," Faith remarked with a quiet little smile.

Mr. Cumnock had gained her consent to visit them by asking her to help him acquire some culture.

"You see," he had said to her, "it doesn't suit me at all for Erny and Erny's friends to be so much better educated than her father. I don't mind being known as an Arizona cow-puncher; that's what I am, but I don't want Erny to feel ashamed of her dad. Now if you'll come to our place this summer and give me a little polishin' for a couple of hours every day, I'll pay you whatever you're earning here, and it'll be a real favor besides."

Faith had consented, and the lessons had prospered, no one suspecting that the long strolls and rides Mr. Cumnock and his young guest took together had any scholarly motive.

"I believe you gave in on Mr. Drake's account," Ernestine teased. "Oh, Faith, it would be just too much fun to see you fall in love. You'd be so sweet and moony and mushy!"

"You ridiculous child!"

At this moment a young man, their neighbor from the next estate, came striding across the grass.

"Oh, hello, Kirk," Ernestine called gaily.

Kirk Hazleton was a tall, slender, aristocratic-looking young fellow, obviously pleased with himself, with life and with Miss Ernestine Cumnock.

"Well," he grinned cheerfully, "who is going to amuse me this morning? I'm terribly bored by my own society, terribly bored."

"Poor boy, let's take him for a walk. The air will do him good," Ernestine suggested with mock sympathy. "We can go to meet Father and Mr. Drake."

When Ernestine found that the same train which brought Mr. Drake to visit them took Robert to the Boys' Camp she suggested their all riding over there that very afternoon. They went, and while Ernestine was being shown about camp Faith and Mr. Drake wandered through the summer woods. Life seemed very good to Faith, and she looked forward eagerly to the coming weeks.

The next morning came a letter which read:

DEAR MISS HAMILTON:

The Palisade School has unexpectedly been purchased by us from Miss Kershaw. Of course every organization has its own plans, and we regret to inform you that we have omitted the course in botany and natural history from our curriculum, and consequently will not be able to use your services. Miss Kershaw has left with us a very complimentary letter of recommendation, which we enclose to you.

Very respectfully and faithfully,

ELLA E. MATHEWS.

Faith read and reread this communication before its meaning finally came to her. The Palisade School had been her home. There, at least, she and Berenice had lived in their accustomed atmosphere of refinement and plenty. But now what would happen? Her desire was to rush to Ernestine and tell her the dreadful news, but she restrained herself. She knew of three other schools, one in and two near New York, which had courses in natural history, and unable to bear the suspense of delay she determined to go to them that very day and see what could be done. It was easy to slip away on pretext of shopping.

Her requests for a position were refused with such promptness that she had exhausted her list by noon.

As the train approached the station, she could see the Cumnock automobile, filled with her friends, waiting for her. Their smiles, waving hands and greetings filled her eyes with tears.

Rushing along the woodland road she was acutely conscious of the softness of the automobile's upholstery and the sense of luxury it conveyed. She glanced at Mr. Cumnock, and he smiled back with a look of hearty approval. She looked at Mr. Drake, and into his eyes came a gleam of admiration. A sudden resolution seized the girl; something of the spirit that sent the French noblesse dancing toward the Terror. She would forget to-morrow! Before her were three months of plenty and happiness. She would accept them and squeeze them dry of every drop of pleasure. Then, at least, she would have tasted of life once! There would be one bright memory to carry through the years to come. Behind her and before her lay stretches of repression. Now she would have her fling!

"Well, have you all missed me?" she exclaimed in a gay voice which was not hers.

She leaned toward Mr. Cumnock and whispered flirtatiously, "What do you say to completing your education this evening? Let's have Mr. Hazleton teach us the turkey trot."

Chapter VII.

DURING the two weeks following her first visit to the Boys' Camp Ernestine came almost daily, and to Robert her coming was always the day's event.

Kirk Hazleton often acted as Ernestine's escort, and he too enjoyed sharing the camp life. At a first glimpse of him Robert had been oddly puzzled, as if his face recalled something, he could not remember what, and the impression remained.

Ernestine became the boy's fairy godmother. Thanks to her, there were candy-pulls, ice-cream parties and afternoons when the big Cumnock car careened through the woods almost swamped under its load of hilarious boys. Robert, of course, was always master of ceremonies at these jollifications, and he and Ernestine became better friends than either realized until parting was imminent.

The day before Robert's departure was scheduled the boys had

planned an athletic meet as a sort of farewell and invited Ernestine and her friends to attend.

"Must you really go back to New York?" she questioned, as Robert walked with her to the machine the day before the meet.

"Yes, as soon as Mr. Drake gets back he'll need me."

The two looked at each other with troubled, uncomprehending eyes.

"Miss Ernestine," he continued, "you don't know how I'm going to miss seeing you when I get back to town."

"Father admires you so much, I'm sure he'll want you to come to see us in the city," Ernestine murmured.

"Do you want me to come?"

"Yes!"

The automobile jerked and sped away.

On the wings of that one little word, Robert's hopes went soaring.

The meet was a great success. Boys ran, boys jumped and wrestled, boys swam and rowed, and the victors received their prizes with shy pride and loud-voiced joy. Robert stood with Mr. Drake watching Ernestine distribute them.

"The boys certainly can thank Miss Cumnock for a heap of their fun," he remarked fervently. "Isn't she great?"

"Yes," Drake nodded.

Robert murmured bashfully, "She's asked me to call on her in the city."

"That's very nice." Drake's questioning eyes met Robert's telltale ones. The boy blushed. There was a minute's silence. Mr. Drake was startled. Had he been wise in allowing these two young people to be thrown together? He loved this fine young fellow, but what might Mr. Cumnock think? He resolved to speak to him without delay.

When the day was almost over Ernestine and Robert found themselves alone in a little glade, mysterious with twilight.

"Hasn't this been glorious?" Ernestine enthused, seating herself on a fallen tree. "If you only weren't going away!"

"I may not even see you in the city," Robert returned gloomily. "Mr. Drake said I oughtn't to come to see you until your father asks me to call."

Ernestine began to laugh. Robert brightened. "I told him you and your father knew all about me."

"Of course," Ernestine nodded. "If it'll make you any happier Father'll ask you. He'll do anything if I only coax him hard enough."

"Would you coax him for me?" Robert felt audacious, elated by the day's success. Big, young, handsome, he bent over the girl, eagerly putting his question. Her eyes fell before the look in his. Her face burned scarlet, but she gave a shy little nod. Then suddenly she was in his arms and he kissed her. But the height of their joy endured only a moment. A shrill whistle intruded, followed by the sound of voices. "I'll never be able to hold Erny long," sounded Mr. Cumnock's familiar bass. "That's plain already."

Robert turned silently and hurried away, Ernestine by his side, too fluttered and inexperienced to find a word.

In a moment Mr. Cumnock and Faith entered the glade.

"Let's rest here a few minutes," Mr. Cumnock suggested. The impulse of two weeks before was still on her. She would forget! She would enjoy this precious playtime.

Mr. Drake had never asked her to repeat that first walk, and little by little she had begun to feel ill at ease in his presence. Consequently she had been much with Mr. Cumnock.

"This is great," he said, as he lowered himself beside her with a grunt of satisfaction.

"Then shall we go on with our talk about the British Parliament?"

His expression became so rueful, so like a dispirited schoolboy's, that Faith laughed.

"Let's take a holiday to-day?" Cumnock wheedled.

Faith looked assent, even as she said demurely, "But I came here with the understanding that I was to—"

"Don't worry!" You've taught me that you're the sweetest, the most fascinating—"

He had risen and was in front of her. He had her hands. He was drawing her to him ardently.

"I want you for my wife."

For an instant Faith was powerless with horrified astonishment. He couldn't be in love with her.

"You don't mean it! Please say you don't mean it!"

Her tone stopped him in the full tide of his love-making.

He laughed sarcastically and turned away. Faith shrank from the sound. It was savage with hurt pride.

"I didn't mean to—I—didn't realize—" she ventured brokenly, striving to express her shame.

He laughed again more mockingly.

Faith gave him one look of pleading and contrition, then, the tears raining down her cheeks, she darted away.

She stumbled half blindly through the grove. Her dress tore. Twigs pulled loose whole strands of her hair. But she pressed on, asking herself over and over if she ought to marry Mr. Cumnock as reparation for her offense?

This was the end of her carnival. No wonder Mr. Drake had avoided her. A scorching flame of shame enveloped her! Then, unbidden, the question flashed across her brain: If Drake were in Mr. Cumnock's place would her decision be so difficult?

Walking with headlong speed she had reached the river-bank. A man sitting in a motor-boat, which rose and dipped with the tide, looked up at her approach. It was Mr. Drake.

[CONTINUED IN NEXT ISSUE]



"You don't mean it! Please say you don't mean it!"

Sunday Reading

Make Housekeeping an Art

Christian Endeavor Topic, November 9th

EVERY now and then we see in the papers and magazines some such heading as "Our Lost American Home." It is an extraordinary lament. Nearly every woman I know is either making a home or helping to make one. Nearly every man is supporting one or hoping to have one to support. The business of training for the work of the home was never so considered as to-day. The output of papers and books relating to every phase of home work and home life is immense. Architects, engineers and tradesmen are rushing the building of houses that are to shelter homes, and never was so much thought given to the convenience and beauty of even the humblest of these structures. There seems hardly warrant for these scare headlines, and yet they may serve the purpose of many exaggerations, and cause us to think a moment of what the value of the home really is.

The Real School

An acquaintance once remarked to me, in explaining an unfortunate change of dwelling, that one house was as good as another for her girls, but her boys must be near a better school. She did not realize that a good home was just as essential to her daughters as a good school to her sons. I should hate to look down on my job as that woman must on hers. To her a home appears merely a place of shelter and food. She knows the *trade*, but she is quite unconscious of the *art*.

The home is the source from which the State is drawn. The State will never be better than its homes. There the children get not alone strong or weak bodies, according to the good sense and control exercised by mother and father, but there they win strong spirits or weak. There is a spiritual contagion as certain as a physical contagion, more certain indeed. If the father and mother are broad-minded, generous, public-spirited, so will the children be. If the atmosphere of the home is carping, selfish, narrow, so will probably be the minds reared therein. We do not look for grapes on thorns, nor figs on thistles.

A beautiful home is not made by money, nor by ease. It is made by the spirit that guides and governs it. "It is a brave, faithful little home, and such as one loves to come upon," writes Octavia Hill of a bright spot in her laborious days. As one thinks of all a home that deserves those fine phrases means of labor and of wise management and of sympathy, it seems as though all would know that women, to whom falls the greater share of this task, need whatever of training can be won for them. The Spartans definitely drilled their girls in courage, self-control, endurance, the virtues they most valued in their men, well knowing that if the State were to be great, homes must be noble, and noble homes are not made without noble mothers.

The Home Gifts

The unflinching courage and devotion of the Japanese in the Russian war were the wonder and admiration of the world. An American teacher in Japan watched her girls go down to the train to bid farewell to fathers, brothers, friends. She saw the grave, quiet partings, then saw these girls come calmly back to their tasks. One day she asked them the secret of their strength. "Why, it is for our country. We cannot weep for what our country needs." No wonder the men of Japan were heroes. In their babyhood, in those pretty homes that seem fragile toy houses to us Westerners, they had learned from their little mothers, as well as from their fathers, the glorious lessons of fortitude and sacrifice. Such are the gifts, whether there be any of material value or not, that every home owes and can give to its children.

Am I My Brother's Keeper?

Sunday-school lesson for November 9th: Abstinence for the Sake of Others. Romans 14, 7-21.

Golden Text: It is good not to eat flesh, nor to drink wine, nor to do anything whereby thy brother stumbleth.

THE theory of life set forth in the Gospels and the Epistles has many points of resemblance to other religious systems. The pure doctrines of some of the Oriental teachers of long-past times show plainly the beautiful spiritual kinship of sincere religious thought in all ages and lands. But in no other system is the doctrine of responsibility for others so emphasized. The Jews had little of this idea. It springs into active being with the life and death of Christ. From

it have grown those distinctive features of Christian civilization—hospitals, homes, reformatories, public schools. At first such works were wholly in the hands of religious bodies. Now they are matters of public concern in every civilized land. Further than these, general governments now concern themselves with the causes of backwardness or failure in any part of the country. We are far yet from the prevention of all preventable disease, the abolition of poverty, but these ideals are definitely before us, and they are the outgrowth of that command, startling enough to the Jewish ears that first heard it, "Thou shalt love thy neighbor as thyself."

What is the Brotherhood of Man?

Responsibility for the physical well-being of all the members of a community is a doctrine quite possible to graft on the secular life, but responsibility for the moral and spiritual well-being of those in some way weak is a further step, and less easy to take. Yet every woman and girl, as well as every man and boy, knows personally how strong is the influence exerted in the daily happenings of business or social intercourse. It is in the country, especially, where the individual counts for so much, where our neighbors know us intimately, and we know them intimately, that we see, most quickly and unmistakably, the effects of personal influence. It is difficult to realize that the guarding of the weak from moral harm is as much our business as guarding them from disease. Just as we give up our precious bit of old cranberry-bog, when our townpeople unite to drain the swamps and rid the village of malaria, so our own pleasure or ease or gain should not weigh in the balance against the moral well-being of our neighbor. It is a trouble and a sacrifice to take pains that the young people have safe and right recreation, that men and women are helped to right living rather than tempted to evil. It is a disagreeable task to fight wrong that has entrenched itself on our own dull indifference. But this, and just this, is the meaning of the great phrase, "the brotherhood of man."

The Burial of Moses

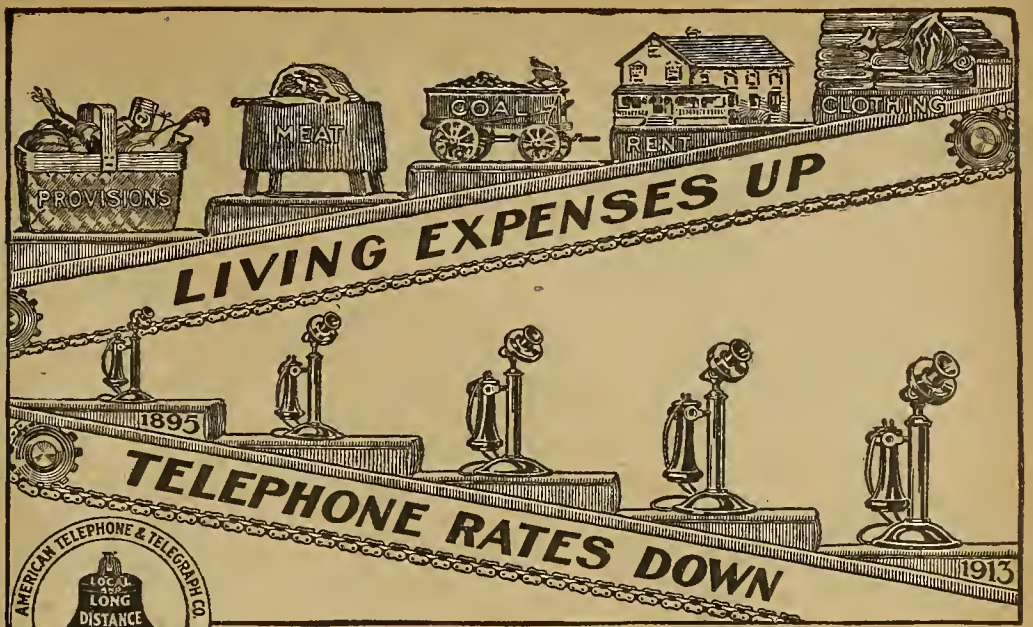
By C. F. Alexander *

Sunday-school lesson for November 16th: The Death of Moses. Deuteronomy 34, 1-12.

Golden Text: Precious in the sight of Jehovah is the death of His saints.

1. By Nebo's lonely mountain,
On this side Jordan's wave,
In a vale in the land of Moab,
There lies a lonely grave.
And no man knows that sepulcher,
And no man saw it e'er,
For the angels of God upturned the sod
And laid the dead man there.
2. Noiselessly as the springtime
Her crown of verdure weaves,
And all the trees on all the hills
Open their thousand leaves,
So without sound of music
Or voice of them that wept,
Silently down from the mountain's crown
The great procession swept.
3. And had he not high honor:
The hillside for a pall,
To lie in state while angels wait,
With stars for tapers tall,
And the dark rock-pines, like tossing plumes,
Over his bier to wave,
And God's own hand, in that lonely land,
To lay him in the grave?
4. Perchance the bald old eagle
On gray Beth-Peor's height,
Out of his lonely eerie,
Looked on the wondrous sight;
Perchance the lion stalking
Still shuns that hallowed spot,
For beast and bird have seen and heard
That which man knoweth not.
5. O lonely grave in Moab's land!
O dark Beth-Peor's hill!
Speak to these curious hearts of ours,
And teach them to be still.
God hath His mysteries of grace,
Ways that we cannot tell;
He hides them deep, like the hidden sleep
Of him He loved so well.

*EDITOR'S NOTE—Cecil Frances (Humphreys) Alexander, 1823-1895, was the wife of a clergyman at Strabane, Ireland. She is the author of many well-known hymns to be found in present collections. Of them, "There is a green hill far away" is known to every denomination. Others begin, "The roseate hues of early morn," "Jesus calls us o'er the tumult" and "Once in David's royal city." This poem on the death of Moses has ten stanzas. The numbers indicate the gaps.



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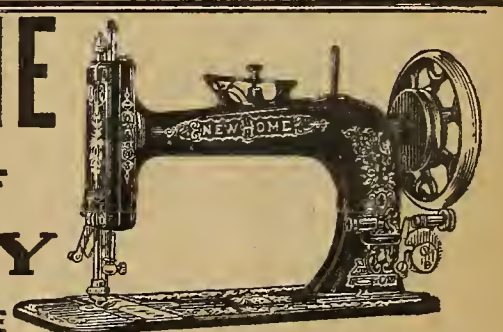
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Our Young Folks

Ceylon at Bettie's House

By Lula Fuquay

ACROSS, listless little girl climbed the stairs to Auntie's room and wriggled into the big chair behind her back. Auntie was busy writing letters, but she patiently closed her desk and turned to Bettie with a smile.

“Now, what's the matter, little girl?”

“Mother's gone to visit a sick woman and left me here to study my geography lesson about Ceylon, and it's all hard words, and I don't know anything about it.” Here she paused to sigh dolefully.

“Ceylon,” repeated Auntie thoughtfully. “I wonder what Ceylon has sent to this house.”

“Nothing,” sniffed Bettie. “Ceylon's 'way 'cross the ocean somewhere.”

“Let's go down into the kitchen and see,” suggested Auntie, starting off briskly, while the little girl trailed along in scorn and doubt, for her ideas of Ceylon were the vaguest. It was as yet only a name.

Auntie went straight to the kitchen cupboard and took out a cake of chocolate with the statement, “This was made from cocoa-plants in Ceylon.”

Bettie's eyes widened in surprise, but before she could more than swallow the sweet tucked into her mouth Auntie opened a little tin can and shook a fragrant brown powder into Bettie's pink palm.

“Oh, goody! Cinnamon. Give me some more.”

“All right, only remember that came from a tree in Ceylon too,” said Auntie, smiling at the rapidity with which the cinnamon vanished before the little tongue.

Next, she opened a bottle of vanilla extract, saying, “Something more from Ceylon,” while Bettie's nose wrinkled appreciatively with memories of cakes and ice-cream flavored with this delicious liquid.

“See what Mother baked to-day,” bade Auntie, disclosing a big white cake baked in layers, with delicious, ragged frosting oozing from every layer.

“Umm! Umm! Coconut cake. How glad Papa'll be. He just loves it, and so do I.”

“In your geography are pictures of great palm-trees on which grow just such big cocoanuts as went into this icing. So you see Ceylon has sent something to our house after all, hasn't it?”

Bettie nodded enthusiastically and searched along the shelves, asking if there was anything else from Ceylon. Auntie pointed out the canister of Ceylon tea and then gave Bettie a few dates from a package.

“Did these come from there too?” gasped Bettie rapturously, for Mother usually warned her away from this fascinating cupboard.

“They certainly did. Now don't you want to learn something else about Ceylon? Come, let's wash those sticky hands.”

Bettie licked her fingers and looked longingly at the cupboard, but meekly followed Auntie to the bathroom, where she made a wry face at the sight of the quinine-bottle in the medicine-closet. Auntie laughed, but had to tell her that the quinine was made from the cinchona-tree which grew in Ceylon, and, taking down another little bottle, she had Bettie spell out the long name written thereon—Eucalyptus. “That is the good-smelling stuff Mother rubbed on your hives yesterday, and that also comes from a tree in Ceylon.”

Then Auntie led Bettie into the parlor and called her attention to the shining chairs and tables.

“Here's another big word for you to spell—mahogany. Yes, it comes from Ceylon too. And when you play your new piece on the piano there is something else to remind you of Ceylon.”

Bettie ran her fingers over the keys, trying to guess what it was, but had to give it up and turned her bright, inquisitive eyes on this wonderful Auntie who could turn a dull geography lesson into play, and who now placed Bettie's fingers on the black piano-keys, saying, “Ebony from the ebony-tree in Ceylon.”

Then they went back up to Auntie's room, taking the hated geography along, and Bettie settled down to study in earnest, but before her lips grew too busy Auntie took from her trunk a wooden fan carved into lace, and Bettie's nose sniffed with delight as a most spicy odor was wafted to her when Auntie unfurled the fan and explained that it was made of precious sandalwood and had come tossing across the wide ocean especially

for Bettie, provided the lesson was perfectly learned before Mama's return.

You can guess how Bettie's eyes sparkled, and how her pencil flew over the paper, and how busily she gabbled. Then she and Auntie had a spelling-match with the hardest names, and by the time the teabell rang Bettie knew more about Ceylon, its idols, temples and products than I could tell you in an hour. And when Mama came home what a happy little girl danced about her waving the beautiful fan, and after tea she found Ceylon on the map for Papa quite readily and traced just the course the ship took bringing the fan to her from clear across the world.

I wonder how many little girls would like to study their geography lessons in the kitchen-cupboard.

The Man Who Made the Brownies—Palmer Cox

By Alice May Douglas

PERHAPS there is no one, excepting Santa Clans, who has brought so much merriment to the little people of the world as has Palmer Cox.

This delightful author-artist was born in Granby, Province of Quebec, and received his early education in the schools and academy of his birthplace.

The beautiful scenery of his native town must have had an inspiring effect upon the young lad, who, while enjoying his fish-line as well as did the other boys, was also wont to try his hand at drawing and to read poetry.

Granby is two miles from the United States line and commands a delightful view of the Green Mountains of Vermont and of the Adirondacks of New York State and is in a district from which many mountains rise. It is at the verge of the great valley of the St. Lawrence, called by the people “The French Country,” owing to the fact that the flat section is mainly settled by the French Canadians. The mountainous section is well timbered and well watered by clear, rapid streams. Mr. Cox, in speaking of his homeland, says, “It is cold to a fault in winter, but cool, bright and charming in summer.” It is at his studio at Granby that Mr. Cox spends most of his time of late.

Mr. Cox was at one time engaged in railroading in California, the most of the time as a contractor, building cars for the new railroads, which at that time were just building.

While in San Francisco, where he lived thirteen years, Mr. Cox took up the work of art and literature as a pastime. He took many lessons from artists, belonging to artists' clubs and was constantly

drawing when leisure permitted and at the same time contributing to the newspapers verses and short stories. He says that while engaged as a contractor he felt that nature had intended him to do something else, but he seemed to lack the courage necessary to enter upon a new calling. Heavy reverses came, however, which discouraged him in railroad work and caused him to choose in middle life the career of an artist-author.

His Stories for Children Were Delightful

His first effort was in the line of broad humor for the comic papers, which, however, seemed to be constantly overstocked. He was then advised to try his hand on stories for children. This advice was followed, and his first article for little people, “The Wasp and the Bee,” was sent to St. Nicholas and “accepted with thanks.” From that time nearly all of the literary work of “The Brownie Man” has been for young readers.

Since the Brownies are a new race, it is not surprising that many inquiries are made concerning them, not by the scientists, however, in their study of primitive man, but by the readers who have delighted in the mischievous creatures. Many letter-writers ask Mr. Cox how the Brownies chanced to be originated and beg that their jolly band be taken to a special city or state.

Mr. Cox's ideas come to him first in pictures, and then he writes the verses to explain the pictures. This causes him to consider himself first an artist, then an author. He says that his earliest recollections are of his passion for drawing pictures and of committing to memory whole pages of poetry. He learned by heart all of the verse in the school readers, nearly half of whose contents at that time was poetry.

He is a Broad and Well-Read Man

Mr. Cox has visited nearly every State in the Union and is well acquainted with Canada. He has taken three trips to California, going the first time by the way of the Isthmus of Panama. His sixth Brownie Book, “The Brownies Abroad,” was prepared mainly from notes and sketches collected while the author was in Europe.

Mr. Cox says that he enjoys some of the novelists very much, but he has always been more interested in the poets, and since he has committed so many of their passages to memory he is never lonely. “The poets have been my companions through life,” he declares. He names as his favorite English poets, Shakespeare, Milton, Burns, Scott, Byron and Campbell, and of American poets, Longfellow and Whittier.



The Whizzles and the Wumps—and Dobbin

By Pauline Frances Camp

THE King of A B C land once
Proclaimed a spelling test;
A most tremendous prize to be
Awarded to the best.

From over all the land they came
And stood about in clumps,
And in the foremost row there were
The Whizzles and the Wumps.

Now Spelerina Whizzle was
A fine or-thog-ra-pher;
No word, however puzzling,
Could ever puzzle her.

While Speleroso Wump, although
Almost as good as she,
Was never quite as certain as
She always seemed to be.

The test began, and one by one
The spellers of renown
Failed on some ticklish, teasing word,
And, weeping, sat them down.

The silent letters bowled out some,
The dummies many more,
Till just one Whizzle and one Wump
Were left upon the floor.

The Whizzles pranced about with joy
At winning from the Wumps,
But, seeing that those little folks
Were sitting in the dumps,
They felt a throb of pity.

For they hate to see folks cry,
So they took them to the printer's,
Where they treated them to “Pi.”

Then whizzed the hard words round about,
As leaden bullets hum;
Polycotyledonous, also
Xylohalsamun,
With parallelepipedon,
Zoophytology,
Pterilegistic, and
Incomprehensibility.

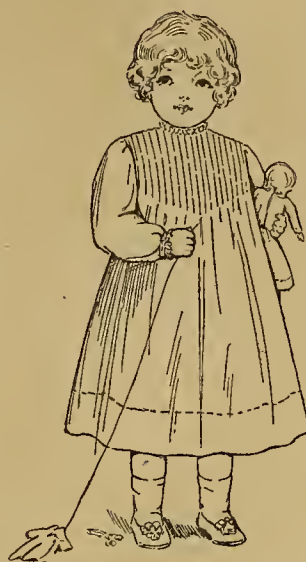
Then came the e-i's and i-e's;
And here the record saith
Young Speleroso Wump began
To draw a frightened breath.
But Spelerina Whizzle never
Hesitated once,
But spelled each word as though it was
The easiest of stunts.

“Achievement,” called the king at last;
“Twas Speleroso's turn.
“A-c-h-i,” said he, and then
His cheeks began to burn.
For right behind him sounded forth
A most resounding “N-A-Y”!
And, Wump-like, he became alarmed
And spelled the other way.

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No. 2416



No. 2329

No. 2408—Double-Breasted Waist: Large Armholes

32 to 42 bust. Material for 36-inch bust, three yards of thirty-inch material, with one-half yard of twenty-seven-inch material for girdle, one and one-eighth yards of tuck net for frills, and one and one-eighth yards of fur banding. The frill that stands up around the neck is quite the newest way of finishing a waist. The price of this waist pattern is ten cents

No. 2409—Two-Piece Skirt: Plaited Back

22 to 32 waist. Material for 24-inch waist, two and one-half yards of thirty-inch material. Width of skirt at bottom in 24-inch waist, one and one-half yards. The plaits at each side of this skirt and in the back suggest the draped effect which is now so essential to an up-to-date dress. Serge, ratine and worsted are appropriate materials for this dress. The price of this plaited skirt pattern is ten cents



No. 2399—Set Consisting of Hat, Scarf and Muff

One size. Material for hat, one yard twenty-seven-inch velvet and four and one-fourth yards seven-inch ribbon. For muff, two and three-eighths yards twenty-seven-inch velvet, seven-eighths yard twenty-seven-inch lining, seven-eighths yard soft crinoline, seven-eighths yard wadding and three yards seven-inch ribbon. For scarf, one and three-eighths yards twenty-seven-inch velvet, one and three-eighths yards twenty-seven-inch lining, two and three-fourths yards fur banding, four and three-eighths yards seven-inch ribbon, and one and three-eighths yards soft crinoline. The price of this pattern is ten cents

This little dress is especially attractive for either the very small boy or girl. While it is extremely simple, it is also dainty with its tiny tucks and narrow lace at neck and sleeves.

No. 2285—Child's Tucked Dress. 6 months to 4 years. Quantity of material required for 2 years, two and three-eighths yards of twenty-seven-inch material, or two yards of thirty-six-inch material. The price of this pattern is ten cents

Plain wool ratine, with brocaded ratine for the trimming, would make the dress, No. 2416, very attractive, or it would look very smart in a soft worsted, with silk in a plaid design for collar, cuffs and belt.

No. 2416—One-Piece Dress: Long-Waisted Effect. 2 to 10 years. Quantity of material required for 6 years, four yards of twenty-seven-inch material, or two yards of forty-two-inch material, with one-fourth yard of thirty-six-inch contrasting material. The price of this dress pattern is ten cents

For the boy's school suit no style is more satisfactory than that shown in pattern No. 2329. This suit is serviceable developed in any of the soft worsteds or chevots in a dark tone.

No. 2329—Boy's Blouse and Knickerbockers. 6 to 12 years. Quantity of material required for 8 years, four and one-fourth yards of twenty-seven-inch material, or two yards of forty-five-inch material. The price of this pattern is ten cents

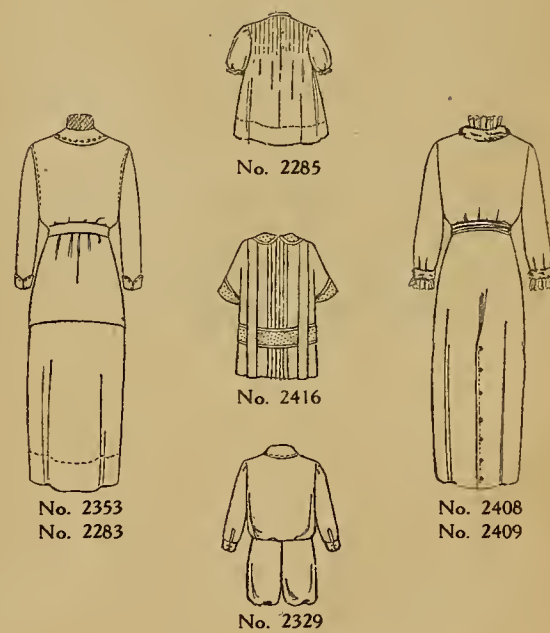
No. 2408
No. 2409No. 2353
No. 2283

No. 2353—Russian Blouse with Large Armholes

32 to 44 bust. Quantity of material required for 36-inch bust, two and one-half yards of thirty-six-inch material, or one and five-eighths yards of fifty-four-inch material, with one-half yard of forty-inch contrasting material and one-half yard of lace for chemisette. Pattern, ten cents

No. 2283—Three-Piece Skirt: Side Closing

22 to 36 waist. Material for 24-inch waist, three and one-fourth yards of thirty-six-inch material, or two and three-eighths yards of fifty-four-inch material. Width of skirt at bottom in 24-inch waist, two yards. The closing of this skirt may be made less prominent by omitting the trimming buttons. The price of this three-piece skirt pattern is ten cents



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The Corn Lady Talks of Weeds

October 15, 1913.

DEAR LITTLE SISTER—It has been a wonderful day. Most of the farmers have gathered their seed-corn, and the hazel-bush is turning brown. There is just enough frost in the air to start the roses on one's cheeks and the same bright color in the wayside sumac leaves. I know, as you are walking back and forth to your school, you are glad that you are a teacher whose feet can follow a country road. Do you remember, when we were little girls, how we used to like to take a tramp on the nice country road that ran by our farm and went on and on like a yellow ribbon—up hill and down? One way it stretched toward the town in the valley; the other way it stretched farther into the country past farm homes. Always and always we walked away from the town. We must have always loved the country best.

The Most Beautiful Thing in the World

This morning on my way to school Berenice Falk caught up with me. She is one of my brightest pupils, a sweet, freckle-faced girl who does thinking for herself. "Berenice," I asked, "what do you think is the most beautiful thing in the world?" Quick as a flash came her answer, "Teacher, it is just along the road going to school."

Don't you think, sister mine, that she has done well to learn the big life lesson so soon?

We are tackling the weed problem in school just now. And I assure you we have plenty of native material on which to work. We have already found sixty kinds of weeds and learned to recognize the seeds. We have put the seeds in little bottles and fastened these with rubber bands on a large piece of cardboard on which one of the pupils lettered this slogan:

Weeds, weeds, bad seeds:
Pull them up; dig them up;
Any way to get them up.

Weeds are very interesting. They are so plucky and undaunted. If they cannot make their seeds fly, they make them stick. If seeds will not do the work,

then they put out underground runners. They have a lot of the thing we call initiative in people. They obey the injunction of a queer old friend of mine who says, "It don't matter much how you git a thing, jes' so it gits got." My boys and girls have decided that we need to be like weeds in some ways—when it comes to getting a hard problem or sticking to the end in a corn club contest. For my own part I'm very sure that there is a genuine message to country teachers to be learned from weeds.

We have studied how to exterminate weeds. In order to know this, you have to be well acquainted with their habits of life and know how long they live. The extension department of the state college of agriculture has identified the weeds that we did not know and has told us the best ways to exterminate the worst ones—quack-grass, Canadian thistle, etc. The other day one of the boys brought some alfalfa-seed to school that his father had just bought. We put it under our little magnifying glass, and there were ten different kinds of weed-seeds in it. Well, when the father found that out he shipped the seed back and ordered his seed from another place. He came and thanked us too. He said the school has saved him a lot of trouble, for he didn't want to get those weeds started on his farm.

All Things Work Together

The hardest thing about weeds, though, is that if one farmer in the district lets them grow they scatter to all the farms around. So are we bound together in the country with our neighbors—for better or for worse. And, Sue, you see that's our big chance. Our schools can be the centers that influence every farm and every home in the district. And we can help our people to see that the greatest things can only come in the country when we are all working together.

I am glad you are happy in your work. We are getting where we can see that Mother was right when she said, "You can be the greatest teacher in the world and be a country teacher." It is the greatness of common things well done.

Loving you, HELEN.

Starting the Ball Rolling—By Hilda Richmond

IN MANY country communities there is a decided aversion to anything coming along under the name of a club, particularly a club for women, so that ladies from progressive neighborhoods who move into such places have to be very careful in starting the social ball rolling. Happily there are so many ways in which clever women can avoid the name club and still accomplish their purposes that many rural neighborhoods enjoy little unorganized groups of members banded together for mutual helpfulness, and still retain their high degree of scorn for women's clubs. As a matter of fact, there are clubs for women that are doing good work, and others that exist for mere fashion and frivolity, so the name has nothing at all to do with the matter.

One little country woman who determined to lift her community out of a rut invited some of her friends to bring their sewing and spend the afternoon three or four times during the fall season. There were little children in almost every home, so the meetings were held early in the afternoons, and there was no hint of club about them. One or two ladies could play the piano, and they were asked to do so; several who were notable housekeepers were asked about their methods of canning and preserving; one who could recite acceptably often gave little readings, and the hostess occasionally had an interesting item of news laid by to read from a magazine and start a discussion. The other ladies took up the idea, and very soon there was a social gathering once in two weeks in that neighborhood that brought new life and happiness to every home, and cheer into the winter.

Many Hands Made the Work Light

In another community where the men were particularly "set" against social gatherings for women a real club was organized under their very noses and with their approval after a lot of preliminary work had been done. Hired help was scarce, as in all farming districts, so three or four ladies "went together" to get the heavy duties of haying and harvesting over with in turns. While they cooked they visited and planned, and the result is a live little organization for social purposes and for helpfulness in that community. "Many hands make light work" is their motto, and the big jobs of housekeeping that once looked so depressing are now the occasions for good times. Thrashing, wood-cutting, barn-building, carpet-rag sewing and kin-

dred tasks are made light and enjoyable by the presence of a band of helpful women, and the added advantage of doing away with company cooking is a great feature in the housekeeping problem. The ladies eat before or after the men on these occasions, usually after the men have departed, and during the long leisurely meal they have to themselves there is much enjoyment.

Make Use of the Rural School

Another way to set the social ball rolling is to do it through the school and the young folks. A school library, a fund for the neglected cemetery, a plan to make some public improvement or some task requiring money will enlist the young folks, and through them every parent can be won over. Old-time concerts, socials, spelling-bees, concerts, popular lectures or any modern scheme for making money will attract the boys and girls, and the whole neighborhood will be enlivened. Of course the ladies must be behind these efforts directing and helping, but they should cleverly keep out of sight as much as possible and give the young people the credit. Before anyone knows what is going on, the neighborhood has emerged from the rut, and good times are the rule instead of the exception.

Only one thing is fatal to the happy social life of any country community, and that is gossip. If the ladies cannot find in the wide field of housekeeping, chicken-raising, preserving, care of children, public schools, music, art, reading, public improvements, good government, health, sewing, entertaining, and all other delightful household tasks, enough material to lift the meetings above petty personalities, then the little club, or whatever it is called, is doomed. Whenever gossip is allowed to creep into any organization people will begin to break up into little cliques or circles or groups, and the whole thing fails. But where personalities are resolutely kept in the background the tone of every meeting is helpful and happy, and there is no fear for the success of the undertaking. Hundreds of farm women would be better off physically and mentally and every other way for a little systematic pleasure, and the country clubs are beginning to supply the long-felt want. If there is a prejudice against calling it a club avoid the name, but try for the intent of the social club. It will brighten and sweeten every home and will help solve the problem of keeping the boys and girls on the farm as nothing else can.



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Counselor's Grab-Bag

Why I Like Aluminum

By H. Edward Knies

SUPPOSE you purchase two sauce-pans, one of heavy aluminum, the other the best in enamelware, and use them continually. At the end of two years' constant use, the one of enamel will usually have a hole in it where the enamel was chipped off by a fall or otherwise. The aluminum, though it may not look like new, for cooking purposes will be just as good as new, and it will continue as good ten years from the time it was purchased. The writer knows of an aluminum saucepan that has seen ten years of useful service, and it looks good for ten or twenty more.

Another good feature of aluminum is its perfect safety; acid fruits or vegetables do not affect it or form poisonous compounds. Moreover, if anything boils dry in it, the vessel is not ruined. For preserves and catchups it is the one ware to use, there being small danger of burning or sticking. Aluminum dishes may be dropped without serious injury to them. Of what other ware can that be said? Another good feature is its extremely light weight, which tired housekeepers will appreciate.

Try It and See

Aluminum frying-pans or skillets are joys forever; they require little grease, are light to handle and never rust. It is almost impossible for food to burn or stick in them, and they therefore require less watching than any other kind. The same may be said of an aluminum griddle; no grease is required for hot cakes, therefore your house will not be smoked with burning grease, as is the case when any other kind of griddle is used, except soapstone, over which aluminum has the advantage of lighter weight and quicker heating. Lovers of hot cakes will appreciate tender, greaseless, aluminum-baked kinds.

Some housekeepers say that they don't like aluminum because it takes longer to bring anything to the boiling-point in an aluminum utensil than it does in other kinds. Food begins to grow warm more gradually, but cooks more rapidly in aluminum after heat is established.

To those accustomed to use the old-fashioned tin cup, that rusts in a month and leaks in six, the one of aluminum proves a godsend. It costs much more at first, but it saves its cost by long service, and it always looks bright and clean, nor can it be chipped or broken by a fall.

If you have never used aluminum, purchase just one utensil, and use it continually. The first cost may seem high, but after it has given you several years of satisfactory service you will agree with me that it has proven its worth.

Shall We Keep Our Bags?

By Carrie E. Kinch

COTTON bags containing salt, flour and sugar are brought into our houses in such numbers nowadays that a woman inclined to be economical is perplexed to know what to do with them. They are too good to throw away, yet hardly worth saving. In cities, where it is easy to run out to a store and buy a bit of cloth any time, one can conscientiously throw these bags away with the rubbish, knowing that the gleaners and rag-pickers will gather them up and sell them. But where stores are far away and there is a not-too-full purse it behooves the careful housewife to wash and save the various bags of cloth that are brought into her kitchen. She will find uses for them all.

Salt-Bags

Salt-bags are especially good for strainers, being sleazy, yet strong. The large size makes a very good jelly-bag. The small size is just right for the coffee-pot. It can be dropped into the pot half filled with ground coffee, the open end clipped together. Or, it may be made into a long strainer by sewing the open end over a circle of stiff wire and hung in the coffee-pot, allowing the water to percolate through the coffee.

Flour-Bags

Flour-bags, being more closely woven, are good for strainers only when a very fine mesh is required. The seven-pound size folded twice and stitched make excellent holders to use about the stove. They are comfortable to handle and easy to wash. Smaller ones lined with outing flannel are equally good. For wash-rags they are not to be despised.

The twenty-four-and-one-half-pound bags are useful for dish-cloths. Ripped open, they can be used for dusting and for pressing. All of the different kinds and sizes make good pieces for mending underwear, they are so soft and fine. When cut into strips they are a valuable

addition to the carpet-bags. The ingenious woman will think of many other uses.

A Corset-Cover for Five Cents

I once saw a corset-cover made from three seven-pound flour-bags. One bag made the back, and two others made the two fronts, leaving enough pieces for facings. It was trimmed with narrow lace crocheted from No. 36 cotton thread. The running ribbon was crocheted as well and finished on each end with a rose. Five cents for the thread was the whole expense, and it was very dainty and pretty.

Make a Sugar-Bag Christmas Present

Sugar-bags are made of soft unbleached muslin. If left unironed it has a crêpe effect. Take a twenty-five-pound sugar-bag which will measure thirteen by eighteen inches, and cross-stitch a row of diminutive pine-trees across each end for a pine-pillow cover. You will be surprised to see how well it looks. I think a stencil decoration would be pretty in brown or green.

All of these bags are useful for keeping pieces of dresses, ribbons, trimmings, etc. Hung up by an applied tape and labeled, they are just as convenient as bags made of fancy cretonne or denim.

A New Kind of Ham

A sugar or flour bag eight inches wide and thirteen inches long, stuffed hard with sawdust, excelsior or rags, makes a very respectable "ham" for pressing curved surfaces like jacket fronts or the tops of sleeves.

Give Ingenuity the Rein

A farm lady last summer showed me two good strong towels which she had contrived out of a twilled feed-bag. They were neatly hemmed and a loop sewed on at one corner. I could well believe her assertion that they would "wear forever." She said she sometimes used the bags for floor-cloths.

Potato-bags, which are generally made of burlap, can be converted into pretty and durable rugs by embroidering on the burlap at regular distances figures in colored raffia or Germantown yarn, or by covering the whole surface with a design in pulled rags. Sometimes the burlap is used to line knit rugs.

Are the bags worth saving?

My Gasolene Flatiron

By Rose Seelye-Miller

HAVING read about the gasolene flat-iron, and having seen sundry and divers not very satisfactory self-heating utensils, I took especial pleasure in studying the different points of advantage. Great improvement has been made in the past two years in such irons, but there is still room for improvement. My first experiment with the flatiron in question was on an exceedingly hot summer morning. I filled the little tank just as the directions told me to do, and after some small effort the flame was established. Right here I will say that such an iron is like any other gasolene utensil, it has to get warmed before the gas really starts working. The iron acted like a charm that first day, but the second time of operation it needed more gasolene, and I filled the tank too full, hence there was not air enough to keep the blaze going. Discouraged and puzzled, I was just about to give up, when a friend suggested taking out part of the gasolene. This I did, and the little air-pump was used, and, lo, the trouble vanished. The iron worked finely. I have learned that the tank must be pumped up a little, say, every hour. From three to six strokes of the air-pump are enough to keep the blaze working. Another thing I have learned is that the small gasolene flue gets smoked and needs cleaning as any lamp does. The gasolene should spray out in a fine mist. If it runs in a small stream it indicates that this flue is stopped up and should be cleaned. You know how a common lamp acts if the fine air-holes get stopped up. It may burn, but not well.

With the gasolene iron the idea is, keep it perfectly clean, keep the air-chamber filled, and never put too much gasolene in the tank. Another and a very important point is, always strain your gasolene through a chamois-skin to get rid of the dirt. You know how an automobile acts when there is dirt in the carbureter. Well the principle is the same with a flat-iron, and most of the irons which are shelved because they will not work are merely dirty. These simple directions should be printed with every iron, but are not. When so cared for this implement is certainly a great saver of heat, fuel and labor.

A dairyman's cow brought twins. He wanted to get rid of the calves before they consumed too much of the rich milk, so he sold them to a neighbor's boy for seventy-five cents each. Is there anything a boy could buy that would bring him more fun and larger returns? Try it and see, boys.

How to Bleach Muslin

By Helena A. Korte

THE unbleached muslins wear longer than the bleached, which are more or less rotted by the chemicals used in whitening them. Therefore, many careful housekeepers prefer to use the unbleached web for sheets and pillow-cases, and even for garments that must have hard wear. Our grandmothers had methods of bleaching that did not injure the goods. I will describe one which has been long in use in our family.

Soak the muslin overnight in a large tubful of soapsuds. Good, pure soap must be used. If the weather is cool it may be soaked with advantage from twenty-four to thirty-six hours. On a bright morning put it through the wringer, and rinse it in water slightly blued with indigo. Wring it out of the bluing-water, but not very dry. Spread it on the grass with weights on the corners to keep it from curling up or blowing away. Every morning sprinkle it and turn it over to prevent mildew. At the end of a week it will be white. The process also shrinks it thoroughly. When ironing other things fold the cloth and lay it under the ironing-sheet. This will bring it into good shape for use.

That Ring Left by Gasolene

By Charles Alma Byers

WHEN gasolene is used to remove a spot from clothing a ring is often left around where the spot has been. A little salt in the gasolene will overcome this, leaving no trace of the soiled spot.

A farmer is a man who makes things happen—if they are happenable at all.

Plucking a Duck

By A. C. Osterhart

PLUNGE the duck into hot water until feathers become sufficiently loosened, but not long enough to break the flesh. Wrap it in a dry flannel blanket or else a linen towel for about five minutes. Next remove both large and pin feathers, clearing as you go; proceed thus until it is entirely plucked. Then plunge it into clean, clear, hot water twice, not employing more than a couple of seconds to do it. (This will render it plump for market or for home use.) Then immediately put it into the cooler. Finish one duck before scalding another, and so on until all are plucked.

The live feathers of geese and ducks never lose their downiness because the fowls have been scalded. They will dry in a few hours' time in a warm room or out in the open air in wire-netting boxes. When drying feathers turn them frequently so they will dry evenly and not mold.



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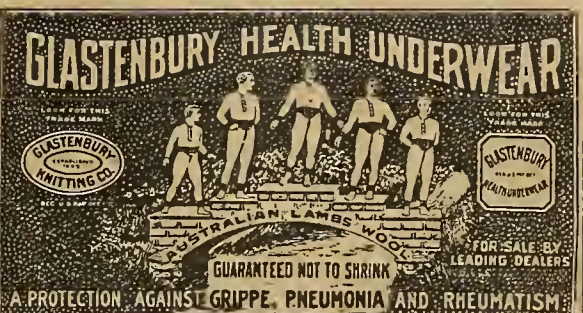
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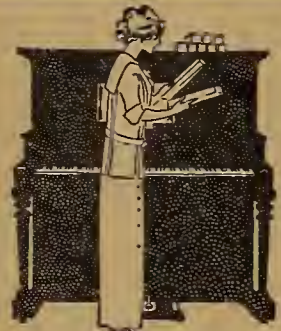
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NEEDLES THREADED FOR CHRISTMAS

How to be Generous Though Poor

What One Ingenious Woman Did

By Mary Scott Ryder

TO FACE Christmas with only three dollars available and a list of over thirty expectant relatives and friends would seem to present a problem unsolvable. Yet, although that was my predicament last season, I discovered to my delight that, even with such financial limitations, I was still able to afford the customary pleasure to others. More than that, I doubt if I ever played "Santa Claus" more successfully.

First, the Wrappings

How did I do it? First, I invested the few dollars on hand in gilt cord, holly-leaf tags and other Christmas-gift wrappings. On gifts they would have gone only a little way; on these items they provided material enough to insure each article I might send having the true Christmas appearance.

Then I took account of my worldly possessions. Among the most treasured of these was a large holly fern that had been much admired. It was still several weeks to Christmas, just time enough to root a cutting each for those who had spoken most enthusiastically in its praise. These cuttings were presented in pots gay with holly-leaves and large red bows. Needless to say, the plant-loving recipients were delighted and their pleasure lasted through the entire winter or even longer.

"Just What I Needed"

Stored away I found a large collection of empty candy-boxes, many almost too pretty for the temporary purpose they had served. Choosing a dozen of the most attractive, I pasted fresh paper linings into them, and then sent the collection to a high-school niece who has a happy mania for "a place for everything and everything in its place." She asserted that they were "perfectly lovely" and something she had needed most especially, since many of her dresser drawers were

complete I had now only to invest a dime in five tin toy horses. I have discovered since that many an expensive game can be duplicated at home for little or nothing. My little nephew was extraordinarily delighted with his racing horses.

Illustrated Letters

As a last part of my Christmas endeavor I determined to make a special effort with Christmas letters. I wrote the cheeriest, newsiest, most amusing notes that I could, and then, going through the year's collection of photographic snapshots, illustrated them, magazine fashion, with the most appropriate of my camera finds. This touch attracted a great deal of attention and gave unusual pleasure, so much so that I have come to regard my Christmas picture-letters to the loved ones away from home as a special labor of love that must not be neglected.

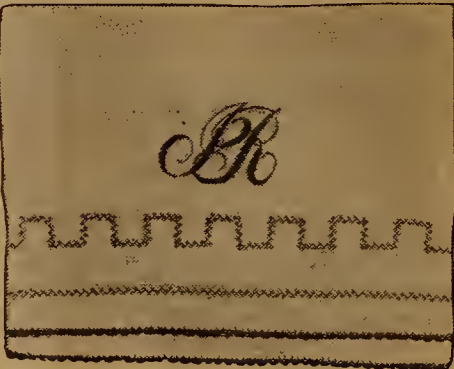
Gifts Made from Ribbon

By Pearl Howard Campbell

ALL sorts of dainty and useful gifts may be fashioned from the pretty figured ribbons so much in evidence, especially during the summer months. It pays to keep a sharp watch of the ribbon-counter for bargains. Short lengths of a yard or so may often be purchased for a fraction of their former price. Their use at holiday-time is limited only by the taste of the purchaser and the ingenuity of her needle.

Double Bags

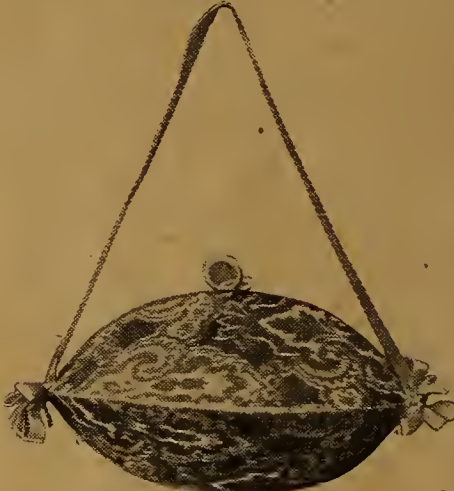
First of all, there are the cunning little double bags, that are just right to hold one's handkerchief, purse and bit of fancy-work. A pretty one intended to be carried with a summer gown was made of a pale pink ribbon with roses and buds of a darker shade. To make one, take a strip of ribbon five and one-half inches wide by thirty-two inches long. Face each end with a strip of ribbon or satin in solid color, three and one-half inches deep. Now stitch twice across each



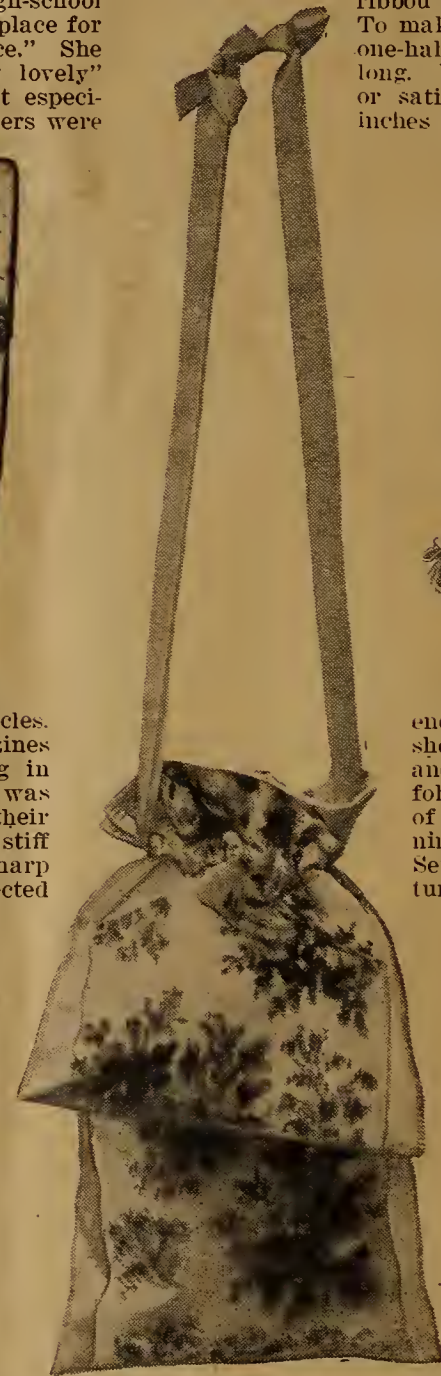
A decorative bath-towel



A handkerchief-case



Button or fancy-work bag



A double bag

disfigured by plain cardboard receptacles.

I had saved my favorite magazines through the year, and now, having in view the needs of a friend who was a "shut-in," I cut off a dozen of their prettiest covers, pasted them on to stiff white cardboard, and then, with a sharp penknife, sliced them up into dissected picture puzzles. Each was put into a separate fancy envelope and entitled. They made splendid large puzzles, whereas the shop ones are often so small that the pieces present difficulties to an invalid's nervous fingers; and my poor "shut-in" was grateful for the occupation they afforded her through many otherwise dreary hours.

I have quite an assortment of small pieces. Wondering what to give them, my eye lighted on my rag-bag. I selected from it a wide variety of pretty remnants, then, with a set of doll's patterns, proceeded to cut out a complete "ready-to-make-up" dollie's trousseau for each. To add interest to this proposition I enclosed in each package a sheet on which I had painted how all the articles should look when finished. I also enclosed a coupon offering a confectionery reward to the child who should present the set completed to me first.

While making my selection for the dolls' trousseaux I laid aside all my silk scraps, then afterward did them up into a pretty surprise package for a certain little old lady with an insatiable hunger for making log-cabin quilts. She was as pleased as a child.

What to give to my one small nephew perplexed me until I saw an expensive toy horse-racing game at a neighbor's. I borrowed it for a little while and duplicated its diagram racetrack on soft felt. To make it

end for the shirring. The first stitching should be about two inches from the top, and the second an inch below that. Now fold the ribbon together to form two bags of unequal length. The first should be nine inches long, and the second, six. Sew the edges together over and over, turn right side out, and run in the gathering-strings of half-inch ribbon, allowing a yard for each piece, and the bag is complete.

Of course by using a yard of ribbon one could turn down a hem and avoid the necessity of using a facing of a different sort, though the effect is rather pretty, especially if the solid color matches the darker shades in the roses. The bags may be made longer or shorter, according to the width of ribbon used. If made of somber shades, they are splendid shopping-bags. The two compartments are very convenient. The cost was only thirty-five cents.

If someone whom you know is going on a journey, make her a pin-roll. Take half a yard of holly ribbon four inches wide and a strip of eiderdown the same width and length. Point one end of both, and bind them together with inch-wide red ribbon. Make a pocket three inches deep by turning over the square end and catching the edges together. This is to hold a paper of pins. Make two loops on opposite sides to hold a tape-needle, and sew a half yard of the narrow ribbon to the pointed end for the ties.

Handkerchief-Cases

Another gift appreciated by the traveler is a handkerchief-case. This is made like the purses our grandfathers used during the Civil War for the paper currency known as [CONCLUDED ON PAGE 27]

The Experience Bazaar

Editorial Note—Here is an open market for the exchange of experiences. Will you not bring your problems and leave them behind? Will you not give and gather the fruits of experience? To give freely and take gratefully is to live wisely.

A Safe Way to Reduce Weight

DEAR FIRESIDE EDITOR — My weight had increased rapidly since birth of my first child until, at the age of thirty-eight, I weighed two hundred and thirty pounds. I was always uncomfortable, easily tired and could not endure the heat. Unpleasant as these things were, I cared most because I could not look nice in my clothes and felt that I was quite unattractive.

Physical culture had proved ineffectual. I consulted several physicians, who told me that it was unsafe to reduce weight by drugs.

A Modern Spartan

Finally, in despair, I said that if Lycurgus, the Spartan lawgiver, could starve himself to death to set an example of heroism I could starve my body into graceful lines for the sake of an attractive personality.

Without saying anything to anyone about it and while continuing to dine as usual with my family, I began to cut down on the amount of food taken. I ate one biscuit instead of two, one potato instead of three, and so forth, and sometimes left off the dessert.

Because I ate very slowly and kept up a cheerful conversation no one observed that I ate less than usual.

Hunger Appeased

At the close of a meal I was more hungry than at its beginning, and I fully expected to be hungry for months, but the surprising part of my story is that within a half-hour after meals I found myself not at all hungry. On the contrary, I felt very light and free and happy. I enjoyed my meals more than I ever had, and I did not become weakened or ill as I feared, nor did I ever suffer hunger except during the half-hour after each meal.

At the end of eleven weeks I weighed one hundred and sixty pounds, which, considering my height, is just what I ought to weigh. I keep my weight normal by finishing my meals just a little hungry.

E. A. C.

Almost all of us eat too much and eat too rapidly. When we eat too much the system is unable to dispose properly of the material offered it. By not chewing our food sufficiently we fail to obtain the chemical action of the saliva. E. A. C. not only reduced her weight but improved her digestion. Probably a very thin person with an abnormally large appetite would increase her weight by doing just what E. A. C. did to reduce hers. Each, by giving her digestive tract an opportunity to act normally, could build up her health and find herself the possessor of exactly the proper amount of flesh.—Editor.

Are Children Born Thieves?

DEAR FIRESIDE EDITOR—A woman and her son of perhaps four years, both of them nice-looking and becomingly dressed, were shopping in a large department-store. The boy persisted in going behind the counter. His mother told him that a big black bear stayed under the counter on purpose to eat the little boys who went behind. His eyes grew large with wonder, and he did not venture back. Presently he began eating apples from a barrel that stood temptingly near, and his mother told him that a big man would come along and lock him up in jail if he didn't quit that; but by this time he had apparently learned that his mother was a liar, for he took two or three more apples while she concluded her purchases. Her remark that he would "get put in jail" came nearer to being the truth than the mother knew, for he was undoubtedly going the road that leads to lock-ups, as is every child who "swipes" peanuts or cookies or other things, and whose parents use no more restraining influence than to tell the offender he will "get into jail."

Stop and Remember

The manager of the department-store witnessed the scene described and at its conclusion said: "I do not know that lady, but I do know that she is laying up much future sorrow for herself and trouble for her son."

"Every child is born a thief," said a grouch man who stood by.

A woman present who had reared two boys whom everyone knew to be manly, straightforward and honest resented this remark—at first. Then she remembered that she had to teach both of hers not to

steal. Henry was only three and a half when he went into a neighbor's garden and picked a tin cup full of peas which he brought home in high glee. This was the mother's opportunity, and she used it. She sat down and talked it all over sensibly. The average child, by the way, has more sense than he is credited with.

The Appeal of Reason

She asked him to remember how they had watched Mrs. Smith pull up the weeds around her pea-vines and carry water to them. She had taken her own dime to buy the seeds. Therefore the peas belonged to Mrs. Smith. Henry did understand, and when he carried them over and gave them to Mrs. Smith he had his first lesson in the rights of others.

Roland was nearly four when he, too, stole an apple while his mother shopped, but she told him no lies. Instead, she compelled him to take the apple to the clerk and to tell him he had taken it. Then she took him home and let every other duty wait while she taught her child not to be a thief.

A Child is no Better Than His Mother

A little less troublesome, perhaps, than the child thief is the one who lies, and every child does who is continually lied to. "Lie to your child, and he will lie to you" is a rule with no exceptions. Threats not carried out and promises of reward not meant to be kept help to form the child liar.

G. M.

Shall We Keep the Fourth Commandment?

DEAR FIRESIDE EDITOR — The farmer is ever ready to howl about oppression; but what would he think if, when tired out with his day's work and his own plans made, the wife should force him to make ice-cream or go ten miles for lemons to make lemonade? This is just the sort of thing a man demands of his wife. He wouldn't do it.

In It Thou Shalt Do All Manner of Work

On Sundays he will invite people home from church with hearty good will, and the women-folk, tired out with the week's work, must turn to and prepare dainty meals, most likely for tedious and unthankful company. I have known farmers' wives to have to work like slaves all day Sunday for twenty callers, use the last scrap of food and miss the church service on which they had counted. And not a visitor lifted a finger to help! Mine is an established rule: A plain, substantial breakfast of fish, fried chicken, some cereal food or something similar; for dinner a cold lunch, and at supper either left-over bits or something easily prepared. So there is no great labor over the noon meal, but the visitor must take "pot-luck," seasoned with a welcome. It is more restful.

C. D.

Books of Value

Constructive Rural Sociology, by John M. Gillette. A book thoroughly alive to present-day conditions. An excellent collection of facts and ideas bearing on our social problems. \$1.60 net. Sturgis & Walton Co., New York City.

Sixty Lessons in Agriculture, by Buf-fum and Deaver. A work intended for the elementary teaching of agricultural principles. It will fill that rôle very satisfactorily. Well illustrated. 80 cents. American Book Company, New York.

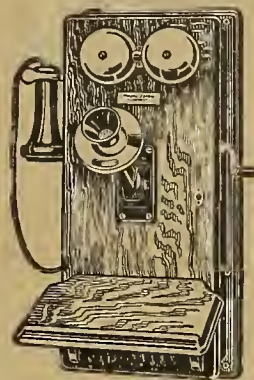
Co-operation in Agriculture, by G. H. Powell, goes into all lines of agricultural organization, from their development to the handling, distributing and sale of farm products. 315 pages. \$1.50 net. The Macmillan Company, New York City.

Country Church and Community Co-operation, edited by Henry Israel, is a book which will inspire. It will suggest means for constructive co-operation in country church and community life, and will help the country teacher. 170 pages. Price, \$1. Association Press, 124 East 28th Street, New York City.

The Challenge of the Country. A Study of Country Life Opportunity, by George Walter Fiske, handles the rural church, school and home life possibilities in a clear-cut, helpful narrative. Particular emphasis is laid upon the practical working out of those problems. 283 pages. The Association Press, 124 East 28th Street, New York City.

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Possibilities for the Domestic Woman

By Adrienne Thum

IN a recent magazine I read an article comforting the girl who has ties and duties which keep her in the home so that she cannot go out into the great world. I think the author gave too much sympathy and overlooked too many possibilities in a condition of life where there are many, many chances not only for happiness but for self-support.

Of the girls who go out into the big world, who study art, music, kindergarten or interpretive dancing, how many succeed in making fame or fortune? How many succeed in making even a living without privations?

Homes are Always in Fashion

I admit that all young women do not have a talent for domestic life, but I believe that the large majority have that talent, and it is one that a woman needs all through life, whether married or single. I know that this is a day of specialization, and that it is wise to learn to do well some one thing, so as to be equipped to make a living now or in the future. But the girl who has made a hit in some line of art may, in five years, be all out of fashion, interpretive dancing may become a thing of the past, kindergarten is continually developing, and the woman who does not keep up with its changes will at last find herself a back number. Should the girl who has studied music, art, teaching, dancing, etc., marry and after a few years be left to earn her own support she may discover that she is almost as helpless as if she had never studied any of these things.

Now the girl who develops herself along domestic lines with the same degree of earnestness and energy and attention to details as are exercised by the girl who studies music or art will always have a way to earn her living when the necessity comes, for food and shelter and home are some of the things that never go out of fashion. The little touches that only the hands of those who love their home can give even to shabby furniture and worn rugs, and that create the feeling of home and rest, are not within the power of all women, I know, but the ones who possess that touch should appreciate it, for it creates an atmosphere that no money can buy. And now for the practical ways in which a domestic girl can make money if she has to.

There are twenty magazines waiting and glad to hear of new ways of entertaining, recipes for cooking, new fancy-work, new ways of house-furnishing, of cultivating flowers, of making aprons, dresses, etc. All the time you are keeping your mind open and observing these things you are cultivating yourself along lines that will in the future be useful to you. If you have a talent for writing there is no place where you can do better work than in the environment and among the people that you know the best. There are some talents that can be cultivated better away from home, but there are so many more that can be cultivated better at home that I feel the girl who can stay there is to be envied, not pitied.

To one who has duly done only those things that have to be done for a bare existence, who has monotonously cooked three meals a day in the same old way three hundred and sixty-five days in the year, kept the house with the same old things in the same old way year after year, with no joy in her home or her friends, I will frankly say: "There is no way for you to support yourself." But for her who has taken joy in her home as an artist does in his work there are many ways.

The Domestic Field is the Largest

In living a good while I have noted the failures and successes of a number of women who were obliged to earn their living, and with the exception of a few who were remarkably talented in writing or had dramatic ability the ones that have made good were the ones who did it along domestic lines. Take the time-old way for a woman to support herself—taking boarders. This is, I know, considered a heartbreaking, thankless occupation, and to the unskilled in domestic and social arts it may be. But to her who has the talent of home-making it is not. She is not forced to take the ungracious or the grumbler at a price scarcely enough to pay for his food, but can choose her guests. If she is a judicious buyer she can please them by a good table at a comparatively small cost. The tact to keep good servants is also a social and domestic gift of great importance. It can be cultivated.

Trained in Her Doll House

When I was a child I had a neighbor, a little girl, that played with me, who loved to cook on her toy stove and make lovely homes in boxes for her dolls. A little farther on in life, when my friend was about grown, it became necessary for her to do something for her own support. She made cakes, pickles, preserves, etc., for her friends. Gradually her custom became larger. She hired a cook and a large kitchen, catered for entertainments, decorated tables, bought napery, china, silver, which she rented, and set beautiful tables for parties and weddings with much more individuality than the ordinary caterer. She saved up money after five years of this work. I could tell you how in detail, step by step, had I space. She bought a confectionery, paying half down. Now in middle life, she has a fine business and is worth fifty thousand dollars.

I know two girls, one an artist and one a musician, both talented, who have taught and worked as hard as she, and who started in life at the same time. But they have saved scarcely anything, and are still working.

Home is a Continuous Education

I have a married friend who after middle age was confronted with the necessity of making a living. She serves lunches to the children at the public schools and makes a good income. Had she depended on having studied, when she was a girl, dancing, music, stenography or kindergarten, do you think she could have made a living out of her knowledge after thirty years?

Another woman whom I know had been wealthy until at the age of forty she found it necessary to support not only herself but an invalid husband. She became a purchasing agent, and almost as soon as she began she had a large and thriving trade not only away from the town but in her home city; for she had always dressed with such taste and furnished her house so artistically that her friends and acquaintances trusted to her taste, rather than their own.

Another domestic woman whom I know, who had always had enough to

live on with economy, suddenly found herself obliged to do something. She tried several things, bookkeeping, being a clerk in a store, as well as painting china and Easter cards. But the living she made was so scant that it could hardly have been called a living at all. She had always made her own and her children's clothes with individuality and taste, so she tried making children's clothes and shirt-waists and selling them to the stores. After various steps along that line she now, after five years, designs shirt-waists and makes from thirty to fifty dollars a week.

A Mother of Many

Once there was a woman who had a great love and comprehension of children. Her husband died and left her with only five thousand dollars' life-insurance and three small children. She wanted her children to live in the country, so she bought a small place about a mile from the city. The house had five rooms, and there was enough pasture for a cow, and also a small vegetable garden, a chicken-yard and a lawn with two beautiful beech-trees. She undertook to have children board with her during the summer. She began by taking two little boys of a friend who had to go out West for her husband's health; then a widower heard of the lovely home and left his three children: till gradually more and more children came. Not only did they develop physically, but mentally and spiritually, for her love for her own children gave her comprehension of all children and a wonderful power to develop the best in them.

Another woman, whom you would know if I felt at liberty to disclose her name, has made fame and money by writing about children, and the reason she has done it is not because she has any particular ability in writing, but because she has children of her own, and her love for them has made her understand, and has given her the perception that makes her stories charming.

Home is the Producer and the Consumer

Social, diplomatic, artistic, executive talents are all called for in home-making, and the beautiful part of it is that all these talents are developed by home-making if it be carried on with reason, sense and interest. Of course I know there are homes where girls are not free to do as they would, where their new ideas of improved ways are discouraged and where money is so scarce that the same old way seems the only feasible one. But diplomacy and ingenuity will do a great deal even for these, and I am glad to say that they are in the minority. Be well assured of this fact, that there is no way to live a free, happy, well-rounded life in the home or outside of it except by energy, enterprise, sympathetic association with others and an open heart to get your share of all the good that is going.

Lastly, I would say to you girls with all the emphasis of which I am capable, never wait to live—live now! The earth is yours, now, and the fulness thereof. In five years will it be? Who can tell? The opportunities you have now are all the opportunities that you are sure of. If you develop them they will increase, if you tie them up in a napkin and wait they will all be gone when you untie it.

The Home Lover

By Arthur Wallace Peach

I KNOW the morning on the hills
Would lure me far away,
And vagabondish little rills
Would have me with them stray.

The winds are always bending low,
And bidding me be fleet
To follow them where'er they go
With gipsy heart and feet.

But sweeter is the call of home
And lowly, common days;
My heart would break if I should roam
From dear, familiar ways.

Kind, friendly faces here I see;
Glad, friendly words I hear;
And little hands here wait for me
To make the life-way clear.

Nay; though the winds and morning call,
And bid me with them roam,
Old ways shall hold my heart in thrall,
And love link me to home!

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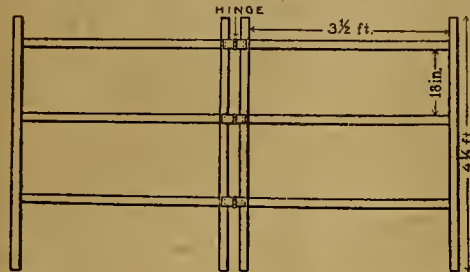


Housewife's Club



Handy Clothes Bars—These bars are easily made and occupy little room when not in use. They are to be used half-way open and on two sides of the stove to dry clothes rapidly. Four pieces of planed strips four and one-half feet long and one and one-half inches wide

are needed for the uprights, and six pieces three and one-half feet by one and one-half inches for the bars. Fasten three of the bars to two upright pieces and leave a space of eighteen inches between the bars. Make another just like it, and fasten them together in three places with hinges. L. B., Vermont.



Cookie Cutters in various sizes can be made from tin covers such as come on baking-powder and coffee cans. Make several nail-holes in each for air. L. W., West Virginia.

Raised Muffins — Dissolve one-half cake of compressed yeast in a cupful of lukewarm milk or water, add half a teaspoonful of salt, one pint of lukewarm milk, or milk and water, one tablespoonful of sugar, two tablespoonfuls of lard or butter, two eggs, well beaten, and sifted flour enough to make a fairly stiff batter. Let it stand overnight to rise, and in the morning fill muffin-pans half full, and bake in a quick oven.

A rich, well-cooked mince-meat can be kept indefinitely by spreading a tablespoonful of alcohol over the contents of each glass jar, then covering securely. The alcohol cannot be

detected in the pies and acts only as a preservative.

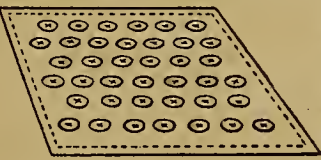
In laying matting it is sometimes a problem to avoid making an unwieldy ridge in piecing. By raveling the ends of two pieces one can get enough twine to tie firmly, close together, on the wrong side, and when the matting is laid no piecing is seen, and it lies smoothly.

To lengthen the time materially between making over mattresses, purchase an upholsterer's needle from a furniture-dealer. Every tuft that loosens from the mattress can then be easily and immediately replaced and in this way the whole mattress is kept neatly in shape until the time comes for a general renewing.

To Remove Grass-Stains—Rub stain with cooking molasses, then wash out with soap and water, and the stain will be gone. C. D. M.

A Use for Empty Cocoa-Cans—One of these cans, with a few nail-holes in each end, is a good soap-shaker. This will utilize all the scraps of soap. B. B. B., Ohio.

To Clean Pots and Kettles—About the handiest little article one can find to quickly clean kettles, iron pots or dishes when the food has burned on, can easily be made at home from a stout piece of ducking or denim about six inches square. After hemming



neatly, sew on buttons (suspender-buttons put on with good, strong thread are best) about one-half inch apart until the entire piece is covered. This little homemade contrivance is much superior to the wire dish-cloths that are sold in stores and costs almost nothing. Mrs. E. M. DEC., Florida.

Needles Threaded for Christmas

[CONTINUED FROM PAGE 24]

"shin-plasters," only much larger, and is a most convenient article. To make it, take a yard of four-and-one-half-inch ribbon, and cut it in four pieces nine inches long. Sew these together to make two covers. Now cut two pieces of bristol-board a trifle smaller, and cover them with the ribbon, taking long basting stitches back and forth. For the lining take any pretty light-colored silk or ribbon, and overhand the two together. The edges may be hidden by a pretty cord held in place by couching. Now for the hinges. These are made of four pieces of inch-wide ribbon. The first two should be ten inches long after the edges are turned in. They fasten at the top of one cover, an inch and a half from the corners and run diagonally across, forming an X in the center and fastening to the other cover. The other ribbons are nine inches long after the edges are turned in. They run straight across and fasten to the first cover just beyond the others. A folded handkerchief laid on the X is caught and held securely when the case is reversed. It is something of a puzzle to get the ribbon adjusted rightly, yet once mastered it is exceedingly simple.

Work-Cases

A very original little work-bag made for a recent fair was constructed of a yard of eight-inch ribbon. This was cut in two pieces, which were overhanded together, giving a strip eighteen inches long by sixteen wide. The remaining selvages were brought together and seams taken across each end. A yard of dainty lace beading was sewed across the top and ribbons inserted to draw it up. It is most convenient because it can be spread out flat on one's lap. The bag could be made of silk or linen folded together, or one might use two pieces of ribbon of contrasting shades.

One of the best sellers at a church fair held this summer was a case for needle-work or crochet made like the button-bags our grandmothers knew. To make it, cut three pieces of bristol-board in the shape of an ellipse, four and one-half inches wide by eight long, and cover them with figured ribbon, taking long basting stitches back and forth. Use white ribbon or any light-colored silk for the lining, which should be hemmed to the outside, taking care that none of it shows. Now fasten the sides to the bottom. It is rather difficult to do this, and unless the three pieces are exactly the same size the corners will refuse to meet. Put a bow of narrow ribbon at each end. Cover two rings with embroidery-silk,

and fasten one on each side to open the box with. Sew a piece of ribbon at the corners to carry it by, and it is done.

Decorative Bath-Towel

By H. Kaufman

THE decorative bath-towel illustrated on page 24 makes a very useful and pleasing gift. Being soft and non-crushable, it makes an attractive covering over other towels more or less mussed in appearance.

The cost is very little, and the effect is good. Select a towel having a close and even nap. Use the color predominating in the other decorations of the room. Whatever the color, use deep tones; they give the best results. The model is made of old blue, but old rose, green or yellow is often favored. The initials are the five-inch size. Form the monogram by overlapping the letters. Two or three letters may be used, as desired.

For the work I used No. 5 D. M. C. crochet-cotton. It requires three skeins of the darker shade and two skeins of about the second shade lighter. Any good make of hard-twisted cotton can be used, but be sure that it is fast color, or it may disappoint you in the laundering. Outline your initials first, using the regular stem stitch. The first letter at the left-hand side is outlined in the light shade, the second letter in the dark shade. Fill between the outlines of the first letter with French knots of the dark shade. For these bring your thread up from under the towel, holding the thread firmly with the left hand. Lay the needle diagonally across the work, wrap the thread twice over the needle, drawing tight, place the needle upright, and stick through the towel about one sixteenth of an inch from the first stitch, still holding the thread firmly with the left hand, draw needle and thread through to the back. You cannot fail in making a perfect knot. The knots should be close together and form a solid mass, not allowing the white to show between. The feather-stitching is done in the dark shade, as also are the crocheted scallops which finish both ends.

For the scallop fasten your thread, make *2 ch. st., catch into the towel, repeat * across. Two ch. st., turn, make 5 do. cr. and 1 si. cr. into each loop.

A pair of small guest bath-towels can be made in the same manner, using one initial of smaller size and omitting the feather-stitched border, for which substitute a row of French knots.

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The body is designed with cowl dash and flush U doors with concealed hinges—but the price is lower.

It is magnificently finished in dark Brewster green, trimmed in polished nickel and aluminum, running boards and wheels to match—but the price is lower.

Then there are Timken bearings, a jeweled Stewart Speedometer—a larger steering wheel, and deeper upholstery—but the price is lower.

Never before such value for such a price!

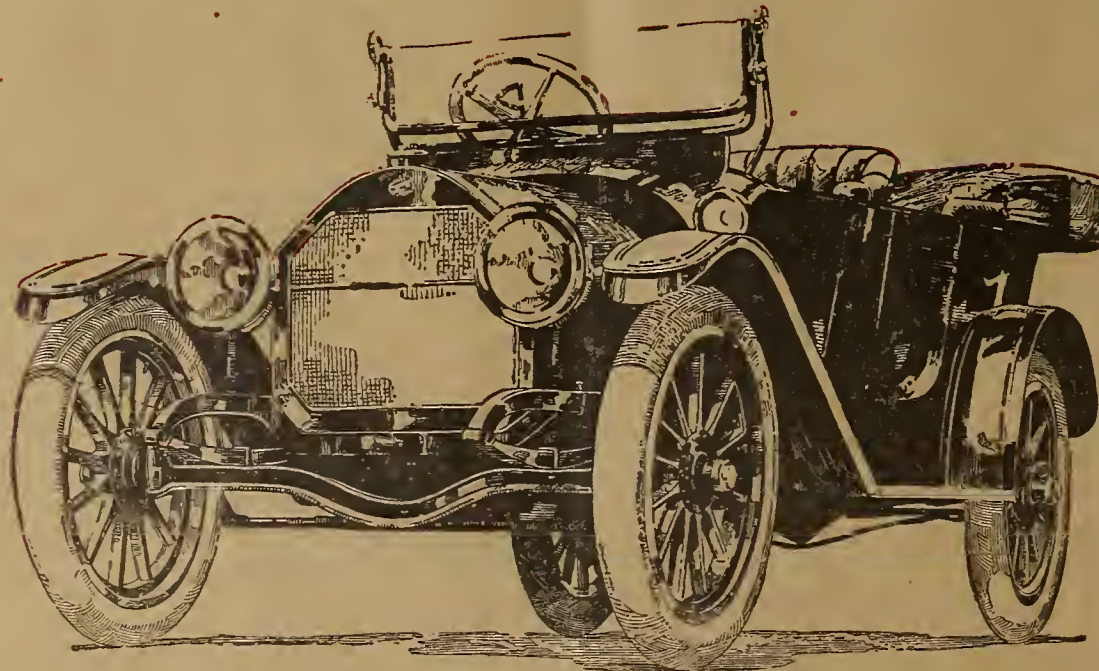
It is conservative to estimate that on the average the new Overland costs you 30% less than any other similar car made. And a production of 50,000 cars is the reason.

Get in touch with our dealer. Arrange for an immediate demonstration. October and November are the finest motoring months in the year. If you are thinking of getting a car negotiate today. Make your appointment now.

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Making Farms Out of Forests

That never was an easy task, but a northwestern writer explains the new and old methods used in his country and shows how some are economical and some are not.

The Question of Winter Eggs

It will be answered from the viewpoint of one keeper of poultry.

What Makes Milk Rich?

A review of what has been said on this important question will interest you. That's why we will give it.

A Successful American Farm-Credit Plan

One would think to hear these rural-credit experts talk that America has nothing of the sort. Mr. B. F. W. Thorpe, Associate Editor of FARM AND FIRESIDE, is telling of farm neighborhoods in this country, where hundreds of thousands of dollars are loaned to farmers on mortgages that never fall due—they have an "amortization" plan, but never heard it called that probably. A very important article, and it's in *this* issue. Don't miss it if you are interested in easier farm loans.

A Gracious Utility

The watchword of FARM AND FIRESIDE is utility—not a cold utility, but one made gracious and beautiful—the utility of mutual helpfulness, of love, whose motto may well be the great Christmas anthem, "Peace on earth, good will to men." In the spirit of this good will it is threading needles, sharpening scissors and saws, and filling glue-pots for its readers.

New Things That are Good

It is not enough for a novelty to be novel; it must also be useful and pretty. FARM AND FIRESIDE thinks that it has revealed a few such novelties, which can be made by fingers not miraculously clever nor prodigally burdened with leisure.

Questions to be Answered

Where can our friend who has not much closet-room hang her best hat safely? What can we give to the friend who loves something entirely frivolous? How can we teach the boys to take their part in this great day, take part in it as mothers and sisters do, with their own hands, which is the only way? What can the isolated dweller in the country find for her city friends to show them that, not in the stores, but in the great storehouse of Nature, lie the most beautiful and the most stirring opportunities for eyes that see?

These are a few of the questions regarding which FARM AND FIRESIDE will have something to say.

Our Old-Fashioned "Literary"

In the old-fashioned "literary" the programs were rather crude. I remember that in ours two persons read a newspaper jointly written by themselves, full of what the theatrical people call "local gags" and as nearly as possible an imitation of the weekly county paper. It was a poor imitation of a very poor piece of town work. That is the trouble with our rural social clubs—they have been, in the main, imitations.

Aside from the matter of going home with the girls, the chief event of our "literary" was the debate. I remember several which we debated all over the place. "Resolved, that Washington was a greater man than Lincoln." "Resolved, that Water is a more destructive element than Fire." "Resolved, that Pursuit is more pleasurable than Possession."

We had some corking debaters. They could rise without notice and speak with a good manner and by the use of actual words for fifteen minutes on any subject. I am not making fun of the old "literary." A great many rural neighborhoods haven't anything half as good in its place. Anything which will bring people of a neighborhood together is better than nothing.

But a better sort of meeting is taking the place of the "literary" and spelling-school. In Wisconsin the law compels school boards to give the use of the schoolhouses without charge to the organized people of the district for any sort of social gathering—debate, recreation, study, or what not. The district must heat and light the schoolhouse for these things. The schoolhouse belongs to all the people.

The New Literary Idea

The state department of education, the extension men of the university, the teachers and everybody have studied out a program for such meetings this winter, and I want to tell our readers outside of Wisconsin what they are doing up there in their social-center meetings. On October 3d the organization was perfected all over Wisconsin in the schoolhouses. On October 10th the officers elected at the previous meeting told of their plans, and were duly inaugurated.

October 17th was a debate: "Shall we ratify the 'Gateway Amendment' to the Wisconsin Constitution?" The people of the State, in session in their schoolhouses, were on this night preparing themselves for a coming election.

October 24th was a lively night for the Wisconsin postmasters and express agents. This was "National Night," and the debate was on the question "Shall the Parcel Post be extended?" The postmaster and the express agent were called in to talk about a thing all were vitally interested in.

Ruralizing the Rural School

October 31st was social night—though by this time all the meetings were getting pretty sociable. There was a program of Hallowe'en games and tricks, on which a committee had been working since the first meeting on October 3d. Prof. P. W. Dykema of the university happened to know a lot about Hallowe'en mysteries, and he was drafted to help every school district in the State. Can you excel that for real teamwork? A lot of boys forgot to put the cow in the church that night on account of the absorbing interest of the doin's at the schoolhouse.

November 7th. Having devoted the previous meeting to fun, this night is given to something really serious. Discussion: "Shall we make provision for the use of the schoolhouse as a clubhouse for boys between school age and twenty-one? Shall we make the same provision for girls?" I can hear in my mind's ear the battle of those who say, "It never has been done, and can't be!" and those who shout, "Let's of the best things haven't been done—and we'll show you it can be!"

And let me whisper in Wisconsin's ear. There's a school-teacher up at Merrill in that same State who is showing that there is no proper twilight zone between school age and the life after school. I am told that he is running a cheese factory largely by school labor, and making it educational. When we get our rural schools really ruralized there will be so much farm work to do at the schoolhouse, in the blacksmith shop, the carpenter shop, the school kitchen, the neighborhood laundry, the farm bookkeeping, the crop plots, the loan association, the seed-room, the creamery, the cheese factory, the egg association, the live-stock associations, that this clubhouse need will be largely a thing of the past. The boys and girls will be in school, years longer than now.

There is an initiative and referendum amendment to the constitution up in Wisconsin, and the next meeting, November 14th, is given to a study of that. Nothing is more impressive to me than this organized meeting of the people to study the very questions on which they are soon to vote.

Give the Mind Food

It is the New England town meeting improved and magnified so as to take in the affairs of a mighty nation of a hundred millions. The States which have these means of training citizens will rule this Nation. Wisconsin is already perhaps the most influential State in the Union—and after a few years of this she will take a place more glorious than that ever occupied by Massachusetts or Virginia. There was a congress of mental hygiene the other day somewhere, addressed by somebody. I forget who—but, anyhow, I should like to have said to it that the first rule of hygiene for the mind is to give it something on which to chew, and teach it to chew.

Wisconsin, through her school social centers, is preparing the minds of her citizens to masticate, swallow and digest the problems of the right way of collective life for all of us. And other States are doing quite as well, I have no doubt. I just happen to be better acquainted with the work in Wisconsin.

And so it goes all winter. "Public health." Other "amendments to the constitution." "Shall we increase our army and navy?" New Year's night. "Immigration." And on January 25th a general exchange of recipes for the entire neighborhood! And samples of these recipes made up? I hope so—and here's a good place to stop.

Hubert Quick

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FARM AND FIRESIDE

PUBLISHED BY
THE CROWELL PUBLISHING COMPANY
SPRINGFIELD, OHIO
Branch Offices: 381 Fourth Avenue, New York City; Tribune Building, Chicago, Illinois
Copyright, 1913, by The Crowell Publishing Company
Entered at the Post-Office at Springfield, Ohio, as Second-Class Mail Matter

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SUBSCRIPTION PRICE

One Year (26 numbers) 50 cents
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Vol. XXXVII. No. 4

Springfield, Ohio, November 22, 1913

PUBLISHED
BI-WEEKLY

How to Get Good Roads

WE ARE in agreement with Secretary Houston in his position, if we understand it, that any plan by which the Federal Government shall undertake the building of the country roads is dangerous. Nobody has ever seen in this paper any endorsement of any of the very well-meant and far-reaching plans for control and construction of such roads by the Government.

The improvement of rivers and harbors is a necessary federal work—and it has been made scandalous by its pork-barrel. The improvement of the country roads—even the main roads—would inevitably, it seems to us, result in a pork-barrel which would dwarf that of the rivers and harbors to insignificance. Such appears to be the view of the Secretary of Agriculture.

If the Federal Government takes any part in aiding the building of roads it should do so by grants in aid of local and state authorities. It might well do this for the betterment of rural mail routes. If it should give funds for such purposes, rigidly confined to well-engineered, well-administered road improvements, it could easily be of some direct and much more indirect aid in the campaign for better roads.

In the main, good roads ought to be paid for locally. They should be very closely associated with local intelligence, local needs and local effort. Not narrowly local, but as local as the use of the roads.

In some parts of the country boys' clubs have been formed, the young members of which competed in keeping stretches of road in order. These have produced fine results. They have been related to the new kind of rural school which the Page bill would give us very soon, and which the Smith-Lever bill fails to recognize.

May we suggest to the Secretary that good roads will come when the rural districts are socialized in their activities, and that they become socialized in their activities just as fast as their schools are ruralized. To get good roads through vocational education in country schools may seem like a roundabout way—but it is a sure way, and a democratic one.

Future Sources of Farm Power

PHYSICAL man-power counts for less as each year passes. Few of our grandfathers ever dreamed of the part inanimate power would accomplish for their grandsons. Horse-power machinery then seemed a long step in advance of the "armstrong" implements.

The prospect now is that the engine and motor propelled machinery will in large part supplant horse-power machinery before the present decade ends. This does not mean that the horse will soon be displaced in a wholesale way. Enlarged operations by mechanical power have thus far called for horses as supplementary aids in numbers practically equal to the horses displaced. When the so-called one-horse tractor or motor now being developed takes the place of the single-horse and double-team outfits, the number of horses required for cultural operations will gradually become less and less. But the probabilities now seem that the activities of the horse will be changed, not discontinued.

There is another matter the farmer must keep in mind. Obviously the gas and liquid fuel propelled machines will be replaced by electric-motor propulsion, which ultimately must become the most economic source of power. Steam flow, waves, tides and wind will all be made to give of their energy, and eventually the immeasurable store of electrical force of the earth and atmosphere will be harnessed to do man's bidding.

This innovation, we believe, is very much nearer of realization than now appears probable.

In the meantime electrical energy produced from coal-mine waste will be developed and conducted to consumers by wire for hundreds of miles in every direction. Not only the coal waste, but low-grade coal, lignites and even the almost limitless beds of peat can be profitably used to develop electrical power.

Recent discoveries made by Swedish engineers have made possible a process for utilizing peat-powder as a fuel for steam-engines, which can be mechanically stoked or automatically fed with the powder or some combination of fuels. Should these low-grade fuels be utilized, as there is reason to believe will be the case, electric power will be within reach of great areas of country.

Unless the future develops possibilities of power not now understood, electrical energy will be almost as indispensable to the farmer as it now is to the manufacturing plant of town and city.

Why Not Years Ago?

WHEN one thinks of it the destruction of life by electricity is a well-tested matter. We use it for the execution of criminals. It has been used in the killing of weeds on railway tracks. Wherever a living thing, animal or vegetable, can be so placed that an

An Ohio Rural Finance Plan

IN THIS issue we give an account of a native American land-bank system which merits the attention of our statesmen who are framing bills for an entirely new system of rural finance for the United States. It is nothing more than the extension to farmers of our familiar building and loan associations.

It does not, so far as we know, use the deadly term "amortization" in its literature, but it "amortizes," or "deadens," the farm mortgage just the same. It does not in its present form seem to accomplish quite as much in the way of cheap money for the farmer as the European land banks. Some of the latter wipe out the loan by payments at the rate of from four and a half to five per cent. a year—but they take from forty to fifty years to do it. The Ohio associations wipe out the debt in twelve years by payments of six dollars per hundred made twice a year. On a basis of four dollars per hundred twice a year the loan is wiped out in forty years, or in twenty-five by payments of five dollars per hundred twice a year.

It is perfectly easy to show that these rates are higher than they might be. These associations are paying five per cent. on their deposits, and it may be urged that depositors are getting the best of it as compared with borrowers; but the answer is that the associations cannot be run without deposits. The associations say they would be willing to take five per cent. if they could get deposits for four.

The significant thing about these Ohio building and loan associations is that they are organizations very well known to all the people of the United States, and the principles of their operation are familiar. The new thing in the Ohio experience is that it has shown that they can be successfully applied to farm loans where the payments must be annual or semi-annual.

Many building and loan associations in the United States have been operated at less expense than these; but they were rather small local organizations, the officers of which received no salaries. In Mason City, Iowa, for instance, the wage-earners have built many hundreds of houses through building and loan associations which were run with no expense except for stationery and the bookkeeper who took care of the accounts.

If such associations were extended to farm loans in the manner of the Defiance County, Ohio, associations there is no reason to doubt that to many farm neighborhoods they would be very beneficial indeed.

Money is higher in this country than in most parts of Europe; but building and loan associations housed free by some business firm whose bookkeeper could keep the accounts for a small salary ought to be able to do the business for less than one per cent. a year. Operated on the mutual plan, under which nobody would make any money out of the funds, there seems to be no respect in which an American building and loan association cannot be made the equal of any rural bank organized on the European plan. Building and loan associations are of two sorts: One is purely mutual, and operates with the money of the members who stand all on the same footing. These are usually organized for local purposes, one of which is usually the development of the community. The other sort is organized for the purpose of affording an outlet for the money of investors. These give the depositing investors very favorable terms for their money, and correspondingly less-favorable terms to their borrowers. Where the former sort can be maintained it is the better of the two.

Our Thanksgiving—By Berton Braley

Let us give thanks that we have earned our bread,
Our daily bread—and robbed no man thereby;
Let us give thanks that many mouths are fed,
Fed with our corn and wheat and oats and rye;
Let us give thanks for strength to do our work,
That work which makes the desert as the rose,
Which brings the harvest up from muck and murk,
Making a poem of earth's dullest prose;
For sun and rain by which this beauty grows,
Let us give thanks!

Let us give thanks for minds that know repose,
Repose that comes to honest weariness;
Let us give thanks for sleep the worker knows,
Who toils his best—and brings no soul distress;
For hearts unfretted and for horny hands,
For sinews great and calm, unfearing eyes,
For good brown earth and wide and fecund lands,
For science ever making us more wise,
For hearth and home and all the rest we prize,
Let us give thanks!

For peace of soul—which money never buys,
For freedom in a world which is not free,
For God's outdoors and overarching skies,
For all the season's changing mystery,
For life and love that comes to me and thee,
Let us give thanks!

electric current can be passed through it, that living thing can be killed by electricity.

Why hasn't it been done years ago as to the evil bacteria in milk? Seemingly nobody thought of it. But in Liverpool, England, for several months now, tests have been in progress for the purpose of finding out whether or not the germs in milk could not be killed by electricity to better advantage than by the stewing process of Pasteurization. The reported results are surprising. A sample of electrically sterilized milk was kept in the temperature of an ordinary room for three months. The flavor of the milk is not affected by the treatment.

The city physician finds that the disease germs in the milk—even tuberculosis germs—can be killed.

The electric treatment is simple, and not expensive. A power plant is required, of course. We await more information; but we expect great things from this discovery.

A central Michigan store window last fall had an exhibit of apples which called forth the admiration of every passerby. "Why, those are Western apples, aren't they?" the people would ask. But the fact of the matter was that the apples were grown in the county in which they were exhibited, polished with a woolen cloth on which was a little paraffin, and neatly packed. The exhibitors used such varieties as McIntosh Red, Jonathan, Snow, Spy, Spitzenberg, Shawassee and Canada Red, also Wagener and Baldwin. The lesson pointed to the better prices which might be received for well groomed and neatly packed apples.

RAINBOW OF GOLD

Making the Break

How Can a Family Without Money Secure a Start on a Farm?

THE reader may remember our editorial telling of a Chicago family who wanted to live in the country, the family of a railway engineer. They wanted to know how, with scarcely any capital, they might remove from city to country.

The interest excited by the editorial was intense. All of the subjoined letters relating to it are obviously sincere and are tremendously interesting. The first is from a carpenter-farmer living in New York State:

"The letter concerning the engineer's family in Chicago who long for a home in the country is very appealing to me, and though we cannot tell them just what is best for

Take Your Trade with You

them we are moved to tell our own experience, and so cheer some fellow on his way.

"It is a great mistake for the city man who moves to the country to think he must abandon his old trade and subsist entirely upon the land. There are thousands of positions in the country in which he can earn a living by his trade and at the same time be learning farm life.

"We bought a farm sixteen miles from town on the Lehigh Valley Railroad, and our eggs, poultry and produce are carried to New York, three hundred miles away, every night, ready for the morning market. I cannot do all the carpenter work my neighbors offer me at good wages. I am a carpenter and still work at my trade. And why not the engineer at his trade in the country, with creameries, farm power plants, railroad pumping stations and thrashing outfits? Last spring I knew of one state road contractor here who spent some time looking for a competent man to run a steam roller. Near the job was a neat five-room cottage for rent and an acre of ground set to fruit. The rental was three dollars per month.

"Hundreds of country communities need the printer, mason, engineer, bookkeeper, paper-hanger and barber.

"And to us it is satisfying—this life in the country. As I write our two children are playing underneath the trees at our door; our four cows, all of which we raised from calves, are grazing on the hillside; three hundred White Leghorns run at will over field and orchard; and I sit and write, resting for a day from hammer and saw, cultivator and hoe, knowing full well that the cows and hens will pay the bills anyway."

UUU

A real, light-bringing letter is the next, from a New Orleans lawyer who has as big a problem on his hands as the Chicago engineer:

"Though I am not a farmer, I am an owner of farms and like to keep in touch with matters agricultural. A few words from me may not be amiss to the wife of the Chicago

The South Means Opportunity

railway engineer. I own several thousand acres of choice land in the South and find it impossible to use it. I am obliged, when I get a tenant, to take some ignorant negro, who leaves my land worse than he found it. Scores of southern landowners are in a similar condition, and if you could bring together the men who want land and the men who own land you would benefit all parties.

"Concretely, take my own case. One of my holdings is an 1,100-acre tract, all fenced, 300 cleared and cultivated, the remaining 800 in wood-land pasture. A clear stream, 150 feet wide and 30 feet deep, flows through it. I have houses, barn, a hundred cattle, a score of horses and mules and plenty of farm implements. My place is nine miles from a post-office or railroad station, with telephone on the farm. I raise hay, corn, cotton, horses, cattle and, of course, vegetables. I have a thousand pecan-trees, wild and uncultivated, which, if topped and budded and cared for, would in ten years develop into a grove of incalculable value.

"I find myself unable to obtain intelligent farmers to work it. I would be glad to place here three or four families of practical farmers each with forty to eighty acres of land and a house, loan them animals and implements for the first two years and furnish them seed, for a rental of one-half of the crops. All their expense during this time would be board and clothes. A practical farmer could feed his family from the land as well as make crops to sell. If after trying it out, he wants to do so, he can buy the land at \$50 per acre and the house at cost, on long-time, annual payments.

"I am not a land agent: I am simply trying to enlist the aid of your influential journal in the good work of bringing the opportunities of the South to the notice of those thousands of good, hard-working northern and western young people who have little chance for improvement where they are and would, do well here.

"Many southern landowners like myself will be only too glad to fill our com-

munities with such people, will be glad to put them on our lands, where, with little or no capital of their own, they can make and own a farm of their own with no cost but their own intelligent labor. We are not a raw community; we have schools, churches and all the essentials of civilization."

Of course any sensible family would scrutinize carefully such an offer. But we feel that many good chances of this sort exist.

UUU

The next letter, which comes from Idaho, offers an equally interesting way out of the city.

Be a Western Pioneer

"I am a farmer sixty-two years old, have worked very hard all my life and acquired a little property by my own and my wife's exertions. Aside from my home, I have 160 acres of mountain land with the timber still uncut, provided with a six-room log house, small frame barn and wood-shed, have fine running spring-water, six miles from a live town of two thousand, and three and a half from a railway siding. One hundred and twenty acres can be farmed when cleared. Soil is excellent and will grow fruit and all kinds of grain except corn. The nights are too cold for corn.

"To the right family—one which after careful consideration earnestly wanted a home—I would give the chance to pay for this from the resources of the place; they would only need enough to live on one year. If they work hard during that time they can have sufficient to make the future secure.

"If the Chicago parties are earnest and worthy they will succeed somewhere or somehow. If not, they will continue in the old rut until they are too old to attempt what they would succeed in while young. I have known the hardships of a pioneer life, but it is a healthful life, and to succeed you are well paid in the satisfaction you get in the things accomplished."

UUU

Anyone can write a nice letter, and this offer may not be as good as the man making it honestly thinks it. But if the price of the land is not too high or the quality too low—things which the city man should make no mistake about—the true pioneering spirit would win.

The next proposal savors of good management, caution and shrewdness. Here it is:

A Share Proposition from Virginia

"I wish you would kindly send this proposal from me to the family in Chicago whose letter you recently published in FARM AND FIRESIDE.

"I am living on a farm in Virginia two miles from Harper's Ferry. It is in fair condition in regard to quality of land and buildings, having a double house, with plenty of room for the family. The acreage is 217 with 50 cleared, the balance in timber and creek-bottom, most suitable for hog-raising. The place is well adapted for dairy and poultry.

"On account of lack of co-operative market service I have not made much use of the place for ten years except in raising a few colts and operating a sawmill at intervals.

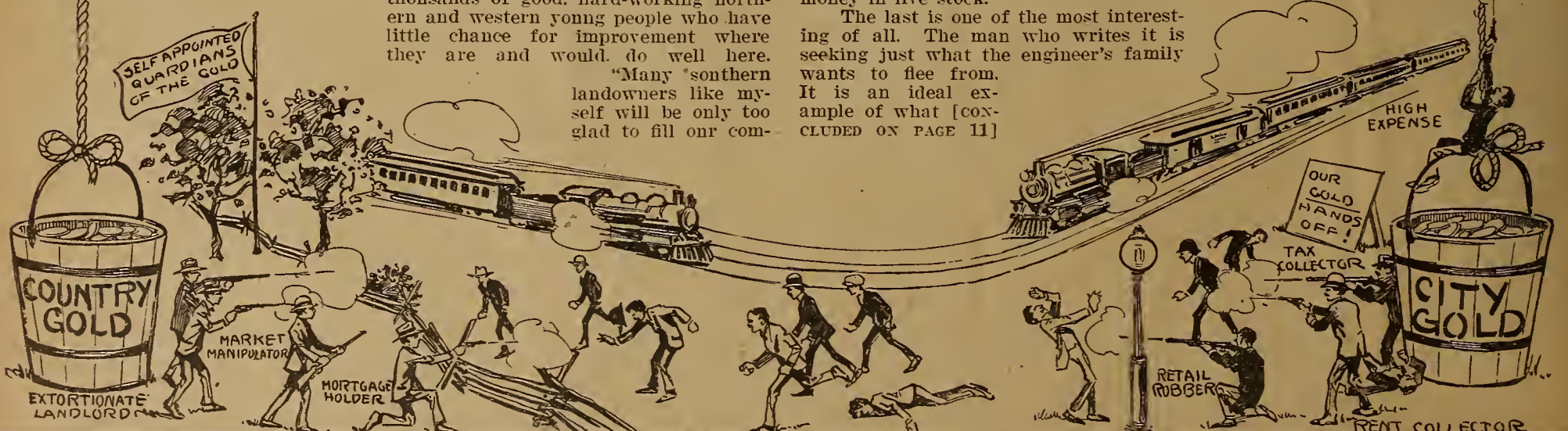
"My proposal is for the family to operate the farm on halves; they to furnish half the stock and machinery eventually, by raising young stock from my mares, one hundred and fifty White Wyandottes and one cow. I would allow them free use of these for working the place, also my farm machinery, including a ten-horse power portable steam-engine with machine for making whole-wheat flour, grinding grain and sawing wood, of which they would have sufficient for home use by sawing what was needed.

"There are twenty acres of old clover-sod to be disked and plowed preparatory to planting with a permanent pasture. It has to be first top-dressed with one thousand pounds per acre of Tennessee phosphoric acid, which costs seven dollars per ton, including freight charges.

"After clearing the woodland we will depend on corn and grain crops, in which the family will be given a half interest. They will also share in the increased value of the land and its crops as they succeed in bringing it into crop rotation. All crops are to be sold as a finished product in the shape of poultry, eggs, butter, meats and live stock.

"My barn is filled with one year's supply of hay and unthrashed oats that they can use. As the home is well furnished, they can sell their household effects and invest the money in live stock."

The last is one of the most interesting of all. The man who writes it is seeking just what the engineer's family wants to flee from. It is an ideal example of what [concluded on page 11]



In the country as well as in the city the bucket of rainbow gold is guarded. If you have limited capital, the principal opportunities are for hard, healthful work

The Ohio Rural-Credit Plan

Is the Trail for the American Farm Borrower Already Blazed?—By B. F. W. Thorpe

EVERYTHING, except a fine-toothed comb, is being used these days in an effort to dig up some workable, unimpeachable plan for financing the farmers. No argument is required to prove the need of such improved credit. Farmers need cheaper and easier money. What we now want is something beyond theory. America is not Europe, and if we have anything now in use here that approaches what the American farmer needs in credit improvement we want to know the rock-bottom facts about it. We want to see if it cannot be used as a basis on which to construct an improved credit system that will work here and now.

In the midst of this wordy war on farm-credit theories, there recently came to the ears of FARM AND FIELDS the welcome news that quite a number of farmers in different sections of the Buckeye State had been quietly getting long-time farm loans on quite a satisfactory basis. At once the duty of making a personal investigation of this credit plan was assigned to the writer.

Near Land Bank in Operation for Years

Building and loan associations have long been familiar to the public mind as institutions for the promotion of town building operations. It will surprise many to know that a near land bank system, in the guise of such associations, is already in successful operation in Ohio.

It was to learn at first-hand the actual workings of this near land bank plan of furnishing long-time flexible credit to farm borrowers that I visited Defiance County, Ohio. I wanted to learn from the farmers themselves their opinion of this new type of farm loans.

A dozen years ago these farmers began to take advantage of a new policy adopted by a local building and loan association. Defiance County is a purely agricultural community, and the towns made only moderate demands on the funds that filled the association's treasuries. So it had to cast about for new investments, and was practically forced into making farm loans as an outlet.

How This Farm-Loan Plan Works Out

The father of this near land bank is Mr. K. V. Haymaker, who worked out the plan of extending building and loan association accommodations to farmers, overcoming the expensive and offensive necessities that farm borrowers have long chafed under; namely, renewing short-time loans and paying exorbitant renewal commissions and abstract charges. The change from town building loans to farm loans was extremely simple, when it was once given attention.

In the case of town loans for building purposes, the contract provides for payments as often as "pay-day" allows. But in the contract with farm borrowers, instead of weekly or monthly dues, semi-annual or annual payments are provided for, and the matter of the duration of the loan is left largely to the borrowers. Manifestly, the farmer's pay-day is likely

annually, would give the borrower about twenty-five years in which to get his mortgage released.

The Whole Scheme is Flexible

All the loan contracts with farmers give them the privilege of making larger payments than the minimum specified, or to pay off the whole loan at any time the farmer may desire to do so.

As a further convenience there is frequently a provision in the farm-loan contract to allow the borrower to make payment of the accrued interest only, for a certain term of years, say for one, two or more years. This form of contract enables the farmer to bring up a farm that he has bought to a better state of productiveness before the payment of the principal is undertaken.

For example, suppose a thousand dollars, or two thousand dollars, are borrowed from one of these building and loan associations for the purpose of draining wet fields; this last described form of contract allows the farmer to reap the benefit of improved crops before any payment except interest is called for.

I am assured by the officers of two of these associations that they have never found it necessary to foreclose a farm loan, and that at the last semi-

if their depositors would accept four per cent. on deposits. A study of the building and loan business of Ohio, as reported by the inspector, shows that, for the year 1912, the cost of conducting the loaning business in the more rural sections was about one per cent., varying slightly above or below, according to the magnitude of the business done. When deposits draw five per cent. and loans six the business seems to be on approximately a cost basis.

An Actual Experience in Paying a Farm Loan

I heard some mighty interesting true stories from farmers who are carrying loans in these "farm banks," and from those who have paid up in full.

One of these bought over one hundred acres of excellent land near Defiance, in February, 1903. The loan was \$3,400, with semi-annual payments. At the time of my visit to his farm, late in September (1913), his land had been cleared of the mortgage in just eight years. Had he much difficulty in making payments? I asked. "No trouble at all," said he. "I laid my plans, paid attention to business, and when, twice a year, the date of payment came around I had the cash ready." His words were convincing.

He was standing on the border of his twenty or thirty acre corn-field, and was just finishing putting up a bumper crop into shocks. He said his only regret was that he had not secured all the original farm. At the time of the purchase this seemed too big a debt to undertake. "I could have handled the whole proposition without much difficulty," said he, "but now I would have to pay about double the price to get the land."

A Dairyman Heads Off the Inspectors

Another case shows the flexibility of this farm-loan plan. A dairyman who bought a three-hundred-acre farm on the outskirts of Defiance placed a loan of \$16,500 with a building and loan association, so arranged that a payment of a thousand dollars could be made every six months. After stocking and equipping the farm, he found sale for his milk in his home town. For a couple of years he carried the loan without difficulty. But by that time it became evident to him that his dairy barn was badly deficient in up-to-date requirements, and a dairy house was also indispensable if he were to meet the requirements of the dairy inspection. The association officials were interviewed, and Mr. Dairyman was allowed, without any expense, to modify his contract so as to require the payment of interest only for several years, during which time his remaining income was to be used for building a substantial modern dairy barn and dairy house. This program was carried out, and now he has completed a barn with concrete foundation and floor, and installed sanitary furnishings, feed and manure carriers, and has a dairy house well equipped. When I visited his farm one hundred excellent-looking cows were stabled and being milked, and no further anxiety is felt about the milk-inspector's visits.

An American or European Farm-Credit System—Which?

The American Building and Loan Associations in Ohio furnish loans to farmers for long or short time periods in any amount up to one half the value of the farm property furnishing security for the loan. The borrower pays six per cent. for his loan. These associations also receive deposits, for which five per cent. interest is paid, the one per cent. being used to conduct the business and maintain a safety reserve fund.

Borrowers usually make payments of interest and some portion of the principal twice a year, but the period of the loan can extend a dozen or a score of years if the farmer desires, without any extra renewal or other expenses.

These associations are strictly co-operative and mutual in character, there being no preferred stockholders to eat up the profits. All members of these associations are on exactly the same footing. Security is another strong feature. These associations are under rigid state examination, and all officials are required to give ample bond for all money passing through their hands. Note the significant facts brought out in this discussion.

annual settlement not a penny of delinquent interest was owing by any farm borrower. I can state after investigation among other building and loan associations in Ohio doing this kind of business that foreclosures are practically unknown among them.

In order to get the opinions of the farmers themselves on this form of rural-credit institutions, I spent a day talking with farmers on their farms, on the highways, or wherever I could find them. I talked with farmers who have secured loans and also with those who, while not borrowers, know how these loans have worked with their neighbors. It was a surprise to me to find that out of all the farmers interviewed no word of serious complaint against this plan of rural credit was heard.

The Loans Never Fall Due

There were many good words for the regulation that allows the time of payment of the loan to run indefinitely without renewal, to suit the convenience of the borrower. The fact was made clear that it is to the advantage of the loan association to have the loan run beyond the average period, which is about ten years, when the borrower is a fairly skilful farmer and does not meet with misfortune.

The feature that seems to appeal most strongly to the farmer is the fact that he can do business in his own community and not with some insurance or brokerage loan agency, whose headquarters are perhaps half-way across the continent from him. If he has a little bunch of money coming in at any time, he likes to be able to put it right into what he considers his home farm bank. And if he is a borrower, that money at once goes to reduce interest, if he so desires.

Why Six Per Cent. Interest?

I made it a point to learn if the rate of six per cent. interest charged for farm loans of one thousand dollars or over was satisfactory to farmers, and found but little criticism of it. In fact, I found several cases where farmers who had previously borrowed money from insurance companies at five per cent. were replacing these loans in their home building and loan association at six. This change did not seem singular in view of the rigid shorter-period requirements of the insurance company and their exorbitant renewal and commission charges, which usually bring the cost of the loan well above six per cent. and make the borrower a lot of trouble and worry in keeping his loan business "buttoned up" safely.

Another important fact bearing on the interest rate is the return the farmer can get from his building and loan association on the deposit of any money he may have idle. Some of the farmers who have these loans, use only just enough of their income to pay the interest and required payment, and deposit the balance in the building and loan association for perhaps six months to draw interest.

Quite a considerable proportion of these borrowers hope and expect to become regular depositors and permanent members of the building and loan association when their mortgages are paid off. There seems to be a disposition among these farm borrowers, in Defiance County at least, to accept the six per cent. rate on long-time loans in anticipation of a profitable interest rate when their farm revenues change from an ebb to a flow tide, and they become depositors.

The building and loan officials all say that they would be perfectly willing to loan at five per cent.

Farm loan, No. 721; Amount, \$1,000; Interest rate, 6%; Payments, \$60.00, January 15th and July 15th

Date	Interest	Total Debits	Credit	Total Credit	Balance
1908					
July 31	.....	.....	.....	.....	\$1,000.00
1909					
Jan. 31	\$30.00	\$30.00	\$30.00	\$30.00	970.00
July 31	29.10	79.10	30.90	60.90	939.10
1910					
Jan. 31	28.17	107.27	31.83	92.73	907.27
July 31	27.22	134.49	32.78	125.51	874.49
1911					
Jan. 31	26.23	160.72	33.77	159.28	840.72
July 31	25.22	185.94	45.78	205.06	794.94
1912					
Jan. 31	23.85	209.79	36.15	241.21	758.79
July 31	22.76	232.55	37.24	278.45	721.55
1913					
Jan. 31	21.65	254.20	38.35	316.80	683.20
July 31	20.50	274.70	38.50	355.30	644.70

These amortization tables showing statements of farm loan accounts, No. 721 and No. 527, were drawn off by the writer direct from the ledgers of the Security Loan Co., Defiance, Ohio. The "Interest" column shows the steady lessening of interest payments, and "Balance" column the decrease in the debt. The statement opposite shows the debt paid in eight years.

Farm loan, No. 527; Amount, \$3,400; Interest rate, 6%; Payments, \$175, February 1st and August 1st.

Date	Interest	Total Debits	Credit	Total Credit	Balance
1905					
Aug. 1	.....	\$419.07	.....	\$1,050.93	\$2,349.07
1906					
Jan. 31	\$70.47	489.54	\$129.53	1,180.46	2,219.54
July 31	66.60	556.14	113.40	1,293.86	2,106.14
1907					
Jan. 31	63.18	619.32	116.82	1,410.68	1,989.32
July 31	59.68	679.00	140.32	1,551.00	1,849.00
1908					
Jan. 31	55.47	734.47	124.53	1,675.53	1,724.47
July 31	51.69	786.16	608.31	2,283.84	1,116.16
1909					
Jan. 31	33.48	819.64	51.52	2,335.36	1,064.64
July 31	31.94	851.58	78.06	2,413.42	986.58
1910					
Jan. 31	29.60	881.18	150.40	2,563.82	836.18
July 31	25.09	906.27	69.91	2,633.73	766.27
1911					
Jan. 31	22.99	929.26	102.01	2,735.74	664.26
July 31	19.93	949.19	140.07	2,875.81	524.19
1912					
Jan. 31	15.73	964.92	57.27	2,933.08	466.92
July 31	14.00	978.92	31.00	2,964.08	435.92
1913					
Jan. 31	13.08	992.00	190.52	3,154.60	245.40
July 31	7.36	999.36	245.40	3,400.00	.....

The respite from interest payments has enabled this dairyman to meet his building expenses, and now his farm property is just that much better security for the building and loan association mortgage. The owner of this farm now feels sure he will experience no difficulty in reducing his loan more rapidly than before, since he is enabled to enlarge his dairy and thereby increase his income.

What the Building and Loan Officials Believe

After getting the opinion of farm borrowers, and farmers who are not borrowers, in regard to the practical worth of this means of farm credit, I sought out officials of the building and loan associations in Defiance County, Ohio, and got their views concerning the adaptability of the building and loan association as a source of rural [CONTINUED ON PAGE 12]

to come only once or twice a year in sufficient volume to make much impression on the principal after paying interest.

The rule which these associations prefer to follow in the liquidation of farm loans is that payments shall be made semi-annually, and shall be six dollars on each one hundred dollars of the loan; in other words, the payment covers the accrued interest and an equal sum to reduce the principal.

Where farmers are not able to carry so heavy a rate of payment, it is the practice to arrange for smaller semi-annual payments. The payment of six dollars semi-annually on each hundred dollars with interest at six per cent. will pay off the loan in about twelve years. Four dollars per hundred dollars of loan semi-annually would extend the term to about forty years; and five dollars per hundred, paid semi-

FULLY NOURISHED

Grape-Nuts a Perfectly Balanced Food

No chemist's analysis of Grape-Nuts can begin to show the real value of the food—the practical value as shown by personal experience.

It is a food that is perfectly balanced, supplies the needed elements for both brain and body in all stages of life from the infant, through the strenuous times of active middle life, and is a comfort and support in old age.

"For two years I have used Grape-Nuts with milk and a little cream, for breakfast. I am comfortably hungry for my dinner at noon.

"I use little meat, plenty of vegetables and fruit, in season, for the noon meal, and if tired at tea time, take Grape-Nuts alone and feel perfectly nourished.

"Nerve and brain power and memory are much improved since using Grape-Nuts. I am over sixty and weigh 155 lbs. My son and husband seeing how I had improved are now using Grape-Nuts.

"My son, who is a traveling man, eats nothing for breakfast but Grape-Nuts and a glass of milk. An aunt, over 70, seems fully nourished on Grape-Nuts and cream." "There's a Reason."

Name given by Postum Co., Battle Creek, Mich. Read "The Road to Wellville," in pkgs.

Ever read the above letter? A new one appears from time to time. They are genuine, true, and full of human interest.

Don't Pay Rent

Buy Southern Land—buy all you can—prices now extremely low—natural increase will return your money in a few years—well farmed, annual profits will run even more. Dairying, livestock, poultry, fruit and truck—these are a few of the big money-making lines. Along the Southern Ry., M. & O. and G. S. & F. Ry. are many openings. Write now for "Southern Field" magazine and land lists, M. V. RICHARDS, Land and Ind. Agt., Room 32, So. Ry. Washington, D. C.

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THAT GREAT FRUIT AND TRUCK GROWING SECTION—ALONG THE ATLANTIC COAST LINE RAILROAD

IN VIRGINIA, NORTH AND SOUTH CAROLINA, GEORGIA, ALABAMA AND FLORIDA. WRITE TO WILBUR MCCOY, E. N. CLARK, A. B. AGT. DESK F, A. B. AGT. DESK F, JACKSONVILLE, FLA., WILMINGTON, N. C.

California

has many bright prospects for the large or small farmer. Markets and transportation facilities are good.

There are many other western states where good farm lands can be obtained at reasonable prices. I have complete information regarding tracts of land, also many business openings along the Union Pacific System Lines. If you contemplate moving west or buying land, write to me for valuable and authentic information.

R. A. SMITH
Colonization and Industrial Agent, Union Pacific Railroad Co., Room 2088, Union Pacific Building, OMAHA, NEB.

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You'll approve the Hansen motto—"Built Like a Hand" when you see how they make work fly—not only at haying-time, but all the year around. And the strong, soft leather keeps your hands warm and well.

Book shows many of 500 styles—driving—motoring—all kinds of work and sport. Outlast a lot of the flimsy kind. If your dealer is not supplied, write us.

O. C. Hansen Mfg. Co.
113 Detroit Street
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The Best in Back-Savers

Carts and Barrows That are Easy to Make and a Pleasure to Use

A Balanced Box-Cart



THIS drop-axle handcart I made four years ago at an outlay of just fifty cents, which the blacksmith charged me for bending the axle and braces. The wheels, axles and bolts used were taken from an old express wagon, while the handles came from a discarded cultivator. Supporting braces made from old buggy tires run diagonally from the middle of the top to the bottom corners.

Cleats are nailed to the front end of sides, so the front of cart may slide in or out. When the front is out, a loaded barrel can easily be put on or off.

FRED W. NEWTON.

Combination Barrow-Cart



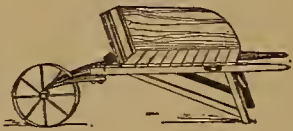
THIS is neither a wheelbarrow, nor a cart, but does the work of both. It is made of boards one inch thick. Piece 1 is twenty-eight inches wide at the top, fourteen inches deep and fourteen inches wide at the bottom. Both sides are tapered equally. Piece 2 is twenty-two inches long. The opposite sides are made the same, which, together with a bottom, complete the body.

Plow handles are attached as illustrated. Any strong pair of wheels will do. I used wheels from an old guano-distributor. They are eighteen inches high. A piece of bent iron keeps the cart upright when the handles are released.

This barrow is roomy and light and balances well. It is easy to pull and does not require much strength to keep it from turning over. To unload, push the handles forward.

JAMES A. SHREDL.

A No-Bump Barrow

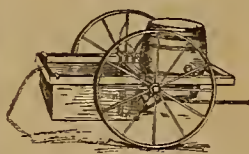


RIP a piece of two-by-six the right length for handles. Round and sand-paper one end of each. Then take an old buggy spring, cut it in two in center, bolt the cut end to the pieces of two-by-three, leaving ten inches to extend beyond end; then put your wheel in loops on end of spring. Bolt on substantial legs and braces.

Make the floor of the barrow of one-inch lumber, letting it extend one inch over edge of two-by-three. Use pieces of two-by-three sawed slanting at one end for uprights, toenail securely and use triangle braces made from board eight or ten inches wide. Provide sides if desired. The spring on the end makes the barrow run smoothly, doing away with jars and jerks and relieving you greatly of sore arms and shoulders which usually follow much use of a wheelbarrow.

S. B. PHILLIPS.

Watering and Dump Cart



GET two light iron wheels from an old cultivator. Make a solid rectangular frame two and one-half feet wide and five feet long by bolting together two-by-three-inch strips of hard wood. Place the axle for the wheels two feet from the back end of the cart. Put two sockets on the frame so that the spindles on an old ten-gallon barrel-churn will fit in easily. Then enlarge the buttermilk hole in the churn so that a one-and-one-half-inch gas-pipe will fit it tightly. Make the pipe two feet long with plug or spigot on outer end. This part of the cart permits water for pigs and

Chinese-Style Barrow



THIS wheelbarrow is very similar to the vehicle used by the Chinese. The main advantages are: First, most of the weight is on the wheel and, second, the barrow can be dumped straight ahead with but very little effort. To make it, use two-by-two-inch pieces for sills and handles. Make the legs two inches longer than wheel is high so as to allow two inches for lap on sills. Any wheel will do, but the wider the tire the better, for there will be more weight on the wheel than on the wheel of an ordinary barrow. The top can be made water-tight if you wish to carry liquids, or you can make it of slats, thereby saving material and making the barrow light.

W. C. HOWDLE.

chickens to be run into troughs without any lifting or the use of buckets.

Now take a box that fits the frame for width and is three feet long and two feet deep. Fasten four hooks on top of box so that the box will hang down on the cart frame. Have the bottom of the box hinged nearest the axle end and have the back end of bottom fasten with two strong hooks and staples. In picking potatoes or hauling trash this part of cart is of great convenience, as you can run the cart where you wish to leave the load, pull out the hooks, and the load is out without any lifting or carrying. Cost of cart:

Two old wheels	\$0.50
Discarded churn .....	.50
Lumber .....	.50
Hooks, nails, etc. ....	.25
Making	1.00

Total cost\$2.75

You will find this double cart a great convenience. It pays for itself many times over in lightening the lifting on the farm.

MRS. MARY McCALL.

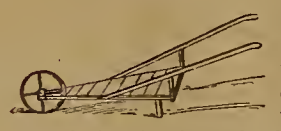
Straw and Hay Barrow



SOAKED bedding should be dried out every day, and this wheelbarrow is just the thing for it. Place the soaked bedding on the frame from two to four inches deep, wheel it out in the sun and air, and it will be dried in a few hours. The air can circulate through it freely because of the open bottom. All that is needed is a good wheel and a few boards or poles nailed together. It can also be used for moving corn-stalks, empty boxes and other light though bulky material.

PAUL H. RUESS.

Flat-Bed Fruit-Barrow



THIS barrow was made for wheeling full baskets or crates of fruit and vegetables. The floor is level when the handles are held by the user. With the ordinary wheelbarrow the sloping floor causes the fruit to roll out of the baskets or crates. The exact style here given need not be followed, but the idea will assist others to make a flat-bed barrow to suit themselves. This barrow cost us nothing except our work, as the wheel, handles and bolts were taken from an old cultivator, and the few boards needed were on hand.

MRS. VALENTINE SCHNEIBLE.

Wheelbarrow for Ice



A WHEEL from any discarded wheelbarrow or farm implement can be used. The frame is made of ash. The side pieces, which terminate in handles, are three inches wide by one inch thick. The cost of materials and making is small. Put ice on this barrow, and it can be washed in half the time required in the ordinary ways. The lightness and strength of this barrow make it desirable for many other uses, though it is especially good for moving and washing ice.

JAY E. JOHNSON.

Milk-Barrel on Wheels



A GOOD barrel cart to draw milk from the barn to the hog-pens is made by taking an old wagon axle to the blacksmith and having him cut fourteen inches off

each end and turn threads on the cut ends of each piece. Next make four blocks, each four inches square and four inches long. Bore a hole through the center of these in the direction of the grain of the wood.

The axles are placed through blocks (A) and then through holes of the same size which have been made in the barrel. Put a burr on the inside, using a leather washer between barrel and burr to prevent leaking. To support the axles, brace the blocks with iron straps or heavy wire securely fastened to bottom hoop (B). Make a handle and support (C).

ALFRED VAN NOY.

Prize Awards

First-prize barrow—"Chinese-Style Barrow" by W. C. Howdle.

First-prize cart—"Low-Down Platform Push-Cart" by Joe White.

My Four-in-One

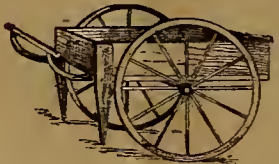


THIS hand-cart, wheelbarrow, truck and sled I call my "four-in-one." I made it last winter and use it regularly. With the sides and end on, it will carry three times as much manure as a wheelbarrow. By taking the wheels, sides and end boards off you have a sled that can be used either winter or summer.

For moving tools around the farm or in hog-killing time it is always useful. It cost me nothing, as I had all the materials needed, but if you have to buy the hardware it would cost about fifty cents. Have the wheels at least six inches in diameter and the side rails of two-by-three-inch oak. The runners were taken from an old sled.

E. G. KNOPT.

Easy-to-Pull Box Cart



HAVE the axle of an old buggy shortened to forty-eight inches. Then place the shafts of buggy upside down on the axle, and fasten them twenty inches from the cross-bar, allowing eighteen inches to extend beyond the axle. Mortise in an end piece parallel with cross-bar, and another across the ends of shafts to pull by. Since the ends of shafts are turned up, the pulling-bar is conveniently high. To have the cart stand while being loaded, fasten a leg on each side of front of body as illustrated. The body is made of a dry-goods box nailed or bolted on.

This cart we find especially handy for hauling stove-wood, sacks of fertilizer and cleaning out hen-houses. It will easily bear more weight than a man can pull. It can be handled in very close places. The cost for shortening the axle was fifty cents.

M. P. TIPTON.

Meat and Grain Cart



IN HANDLING heavy hogs on butchering day, much lifting may be avoided if you have a two-wheeled cart like the one shown in the sketch. There will be no necessity for carrying the hog after it is cleaned and ready to be hung up. Just roll the hog on the cart and push the cart to the desired place. Adjust the gambrel, raise the hog, pull the cart out, and the hog is hung without any back-straining. If the hog is an extra large one and needs to be higher two planks can be placed for the wheels to run on.

In the construction of the cart one can be just as original as he wishes, according to the material at hand. The wheels, axle and handles for my cart were taken from an old walking cultivator. The platform is made from inch spruce boards. The only cash expense in making my cart was a few cents for nails.

MRS. VALENTINE SCHNEIBLE.

A Steady Two-Wheel Barrow



THIS barrow has two wheels, which make it strong and give it a good balance. When gathering truck you can straddle a row of plants with this, which you cannot do with a one-wheel wheelbarrow.

The side rails can be made from old buggy-shafts. The body is made of five-eighths or three-fourths inch material. The iron braces are one-fourth inch thick and well bolted. You can carry water-barrels in this barrow without fear of upsetting them.

HORACE H. DAHL.

Low-Down Platform Push-Cart



PLATFORM (A) measures four feet by two feet ten inches. It is made of three-by-three-inch pieces four feet long, with boards nailed across. The drop axle goes under the center of the platform, to which it is held by screw clamps attached to bottom of side rails. The handles (B) are from an old plow. C is one of two brace rods from handles to platform. D is one of two brace rods between axle and platform. E is the axle, which clears the ground by six inches. The hardware was secured from a discarded riding cultivator. We use this cart mostly to haul milk from barn, to haul corn from field and to move stones and wood.

JOE WHITE.

The Market Outlook

Cattle Prices and Shrinkage

By W. S. A. Smith

IT WAS the prophet Elijah, I think, who when praying for rain sent a man to look at the sky. On his third look he reported a cloud no bigger than a man's hand. Well, we have that little cloud now. If cattle keep going higher and corn goes to a dollar a bushel in spring, as many think it will, farming will be an ideal life, and we will not be selling our farms for a mere \$150 or \$200 an acre. They will be worth \$500 and upward.

Cattle-feeders who have been buying cattle at from seven and one-half to eight cents, with the idea that the price of meat will advance so as to make them a direct profit, are likely to be sadly disappointed, for the consumer is getting balky. Under our new tariff, beef is now coming from the Argentine. It will come more freely if beef advances this winter.

Prime lamb carcasses are being offered f. o. b. New York, January delivery, for ten cents. Can you meet it? With corn at seventy cents in Chicago (October), Argentine corn was offered at seventy and five-eighths cents in New York, and a shipload was landed at Galveston, Texas, at seventy-two cents. Is there anywhere in the United States where you could buy corn and ship it to New York or Galveston and meet these prices?

Reduce the Cost of Production

Just a little cloud! Watch it grow. Does this mean that we will have to give up? Not by any means. When a merchant or manufacturer has competition he meets it by changing some of his methods and reducing the cost of production. That is what we must do. Feeding cattle for beef for a direct profit is speculation, begun and often ended in six months.

Indirect profits are a life's work, but, nevertheless, the safest and soundest investments a farmer ever put a dollar into. The man who feeds for direct profits figures on a profit above the market price of feed and labor. The man who feeds for the indirect profits figures on selling the product of his farm through live stock, and his profits come from his increased production. There will be lots of money lost this winter by the direct-profit feeder, especially the unbalanced-ration feeder. I have filled my own yards up again with cattle, but I am not worrying about the price they will sell for. I am more interested in making my land produce four tons more silage to the acre so that I can feed on a smaller margin and meet competition.

How Much Shrinkage?

If the indirect profit is a sound business, then it certainly is worth learning. Did you ever study shrinkage in cattle? Cattle are often bought by farmers in the country on a basis of a three per cent. shrink. Thousands have been sold this year in the range country on that basis. But is three per cent. shrink always enough? I had a friend who bought eighty-eight head of yearlings in Cherry County, Nebraska. These cattle were to be driven six miles and weighed with a three per cent. shrink. The purchaser for his own satisfaction had them weighed on arrival at Sioux City, and found that he had in addition to his three per cent. shrink, just seven per cent. more, making a total shrink from gross weight of ten per cent. If I had bought these cattle on their arrival at Sioux City from a commission firm, even allowing twenty pounds for a fill, they would have averaged 740, whereas if you had bought them next day from a dealer their weight would have been around 800. If they were weighed after being on feed one month I would have a nice gain, you would have little or none. Water is high at seven cents per pound.

Another friend sold three hundred steers on his ranch to a speculator for seven cents, cattle to be driven six miles and weighed with a three per cent. shrink.

Freight to Sioux City was eighteen cents a hundred, so that if the allowed shrinkage were enough these cattle should have been laid down in Sioux City for \$7.18 a hundred. They were sold on the market for \$7.50, and lost the speculator \$200. We have very fine water here, and cattle soon fill. But there's quite a difference as to who they're filling for.

Taking the Winter Stride

By L. K. Brown

THE market has continued to decline lately, but the bottom has been about reached according to stock-yards talent. The packers have considered it time to put prices on a winter basis, and so have grasped every opportunity to lower the price. Circumstances have favored them. The light-weight hogs have been plentiful enough to supply the current fresh-meat demand, and the surplus over this has been used as a

club in their bear campaign. Eastern packers have been able to obtain locally all the light weights that they needed. Thus they removed the competition of the shipper in the western markets, for all but the heavier weights, of which they are never strong buyers. The packer has had price-making somewhat in his own hands, but the country has been inclined to balk at the declines, so that small rallies have often occurred. It is claimed that the packers are after a \$7.50 to \$8 Chicago market.

With the decline during the past few weeks in the price of lard, foreign demand for this commodity has materially increased. The domestic demand has remained about the same, and as the current supply is rather scant, the stocks are being rapidly depleted. It will doubtless be well into the winter before lard stocks begin to accumulate again, as there is but a small percentage of lard in the current run of hogs.

Reports from the cholera-stricken districts seem to be a little bit encouraging. The coming of early cold weather has seemed to benefit conditions somewhat. The demand for serum has been far in excess of supply, and many new private companies have been formed to start its manufacture. In buying from such concerns the farmer must be careful of the makers' ability and responsibility. With good serum there is no doubt that it can be depended upon to prevent cholera, and it is the only method.

New corn is beginning to show in the shipments now appearing at the yards.



The better the quality, the higher the price

Spring pigs are larger and fatter, and the older hogs carry heavier flesh. The average weight is a little heavier than of late, and because of better quality pigs have advanced in price proportionately with other weights. It will not be long before the market takes the winter stride and gets on a sound footing.

Mutton Prices Maintained

By John P. Ross

THE close of the last and the opening of the present month found the leading sheep-markets crowded with what looked like the tail ends of about all the western flocks. Much of it had to be sold at any price it would fetch, and a good deal went to near-by feed-lots. It is remarkable, however, how little the prices of good, finished lambs were affected, and the price of good wethers, ewes and yearlings not at all. Really desirable feeding lambs still command from \$6 to \$7.

Looking farther back to September and October and considering the enormous receipts of sheep and lambs—the latter largely in the majority and pretty equally divided as to sex—one is led to wonder where the breeding ewes of the future are to come from. As to beef, we can only rely upon the foreign supply; but little is heard as to the possible scarcity of sheep, or as to the frozen carcasses which are to come in to take the place of our home-grown lamb and mutton. It is beginning to be generally understood that hardly any real lamb, frozen or chilled, gets to Europe. New Zealand is about the only country exporting it, and London gets about all there is of that.

Mutton Comparatively Reasonable at Retail

Compared with the cost of other meat, prices of mutton and lamb are reasonable. It is, at all events for the present, better for their producers that prices should remain somewhat lower than those of beef and pork so that their growing popularity should not be checked; moreover, if prices go much higher foreign competition would be stimulated. At present no temptations to large imports of mutton and lamb are offered. No great changes in the meat or wool markets are visible.

As the time for bringing in the sheep from the pastures approaches, the careful shepherd takes steps to lessen, as far as possible, the danger to his flock from external and internal parasites which they are pretty sure to have acquired during the early summer and to have nurtured into greater powers of mischief up to the present time. Dipping, if necessary more than once, provides a very effective safeguard against such external foes as ticks, lice and scab, and in any case should be resorted to before yarding the sheep.

The various creatures that gain access and make their home in the head, liver, lungs, stomach and in all parts of the intestines are by no means so easily dislodged.

Snuff and Vermicides

For those affecting the head I know of no better remedy than snuff mixed with a little oil and injected into the nostrils. The object is to promote sneezing and thus eject

the worms. This is a favorite remedy with old-country shepherds. The larger worms infesting the lungs and stomach can often be driven out by one or another of the well-known vermicides. Where the presence of great numbers of the smaller stomach-worms is suspected, it is safest to consult a competent veterinary surgeon, or the animal experts of your state agricultural college. Especially are precautions necessary to guard the ewes from these pests, for to rear robust lambs they themselves must be in good health.

The National Farmers' Union agreed to hold the cotton of its members for a price of fifteen cents a pound. The agreement is perfectly correct; but how about our justly celebrated Anti-Trust law—under which trusts have flourished and farmers' organizations have been dissolved?

Selling High-Class Honey

By K. E. Hawkins

"GEORGE, I'll give you fifteen cents for all the honey you'll bring me this year," remarked the groceryman to a steady, farmer customer.

"Not on your life," was the ready reply. "Why should I sell it to you for fifteen cents when I can get twenty for all I have, and more too?"

There is the rub with the farmer beekeeper. The storekeeper, the commission man and a dozen others fleece him out of half he might make in the honey line, and it's usually his own fault. This man sells his honey to private customers, getting the best retail price for it, instead of turning it over to the storekeeper at five cents less a pound. True it means a little more work, but work brings its reward.

Pure Honey Has a Demand

When your honey crop is ready ask your wife to put a case or two in the buggy when she goes to those private customers with the butter and eggs. They are always glad to get honey the purity of which is assured. Then, too, they always pay top-notch prices, as they do for the good butter. I know one farmer's wife in Illinois who makes one trip to Joliet every week of her life with butter and eggs. Her husband has nine swarms of bees, and this very year the product of the bees has been over one thousand sections of marketable honey. Nearly every private customer, and they have many, in Joliet has ordered a case of honey from the sample she showed along with the butter and eggs. Nearly every customer had a neighbor or two who bought some of the product when they saw it and were told about it by their friend.

"After I got home last night, wife made hot biscuits, and we had some of that honey you gave us. Say, it was good. Can't you send us twenty pounds by parcel post?" might well be the text of a letter to a farmer from a friend. The new rate would allow the sending of twenty pounds for fifteen cents within 150 miles from the farmer's post-office. Every farmer has many relatives and friends he can drop a line to and sell a great deal of honey this way. In fact, I know of an Iowa farmer who has already shipped some five hundred pounds this way, solely on orders got from letters written to friends who knew by experience the value of his products.

Where the Man Himself is Important

The whole thing is marketing it yourself, saving the middleman's and several other betwixt men's profits on your own goods. Get a small rubber stamp, and stamp your name and address on each section. You will be surprised at the number of orders it will bring. Be sure your honey is clean and that the surface of the sections is cleaned. Appearance forms an important price in grading, and grading makes the price. Don't sell combs which are broken and leaky. Poor honey on the market lowers the price of all other honey there. Most people will buy anything because it is cheaper. Poor honey is always put out at a lower price.

Fill the pig's stomach while he is young, and he will fill your purse when he is grown.

Cattle from Great Britain

THE Government has removed the cattle quarantine from Great Britain, and cattle may now be imported from there. Irish cattle may be imported if they are brought through a British port.

On June 25, 1912, the quarantine was established to protect this country against foot-and-mouth disease then prevalent in the British Isles. Since then no importations have been allowed. The disease has been stamped out, and importations are now safe.

Who knows how much pasture rape will furnish? In New Zealand tests have been made with Essex dwarf rape showing a yield of about thirty tons to the acre, and Giant Broadleaf nearly forty. Either of these pastured 224 sheep to the acre for fourteen days. What crop can beat this? And can the United States equal New Zealand?

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VELLASTIC
Ribbed-Fleeced Underwear

All that you expect in perfect-fitting, pleasant-feeling, long-wearing undergarments are found in VELLASTIC Union Suits. They are ribbed for smooth, easy fit—fleece-lined for comfort and warmth. Though medium-weight, VELLASTIC is warmer than many of the heavy, bulky underwears and more comfortable than all of them.

VELLASTIC warmth and comfort is insured because the fleece cannot wash away or grow soggy.

For Men, Women and Children
Separate garments as well as Union Suits at your dealer's—50c and up. The Bodygard Shield is your safeguard—look for it.

Write for the Bodygard Book No. 39.

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RUNS EASY
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Our 1914 Model Machine saws faster, runs easier and will last longer than ever. Adjusted in a minute to suit a 12-year-old boy or strongest man. Ask for catalog No. M12 and low price. First order gets agency.
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Novel watch-shaped lighter. Operated with one hand; gives an instantaneous light every time. No electricity, no battery, no wires, non-explosive; does away with matches. Lights your pipe, cigar, cigarette, gas jet, etc. Handy thing for the end of your chain. Tremendous seller. Write quick for wholesale terms and prices.

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AGENTS--200% Profit

Foot Scraper and Cleaner—Needed on every porch and outside doorstep. Right now is the time to sell it—A winner. C. P. Draper, Mass., first order for 200. C. A. Johnson sold 40 in 1 1/2 days. W. W. Harpster, Pa., made \$27.45 in 4 evenings, spare time work. Write quick for terms and free sample. A postal will do.

THOMAS CO., 2946 West St., Dayton, Ohio

AGENTS WANTED (SPARE TIME)

EARN \$75. to \$250 a month.
Write for Special Agency Proposition.

The Canton Cutlery Co.
Dept. 243 Canton, Ohio

Agents Wanted for lubricating oils and paints, putting in entire time or in connection with other work. Good chance to increase your income. Address The Harvey Oil Co., Cleveland, O., Dept. S.

Wherever Alfalfa Grows

or can be grown, wherever kaffir corn grows or can be grown, wherever pea-vine hay grows or can be grown, there is a place for a Stover Alfalfa & Kaffir Corn Grinder.

This machine can be used in nearly every section of the United States. It will cut and grind the fodder mentioned above and with this can be ground dry ear corn or shelled grains independently or mixed with the hay so that every feeder can produce his own balanced ration.

We build a full line of Feedmills and Samson Windmills.
Send for catalog.

STOVER MFG. CO.
216 Vine Street
FREEPORT, ILL.



Big Xmas Surprise Box for You

ABOUT this time every year we prepare a Special Christmas Surprise Gift for *Farm and Fireside* readers. This year it is a Christmas Surprise Box. Every article in the Big Surprise Collection that we have for you has been designed especially to meet your wants during the holiday season. The illustration at best can give you but a slight idea of a few of the many articles in your Surprise Box.

Beautiful Holly Box Contains 100 Lovely Presents

ALTOGETHER there are one hundred different articles in your Surprise Box. You will wonder how we are able to make you so many valuable gifts, but that's a secret. The important thing is that this Big Christmas Collection is even much nicer than you will expect. Here are some of the articles in it:

- | | |
|-----------------------------------|-------------------------|
| 17 Beautiful Christmas Post-Cards | |
| 8 New Year Post-Cards | 4 Large Christmas Tags |
| 4 Large Christmas Cards | 4 Medium Christmas Tags |
| 4 Medium Christmas Cards | 4 Small Christmas Tags |
| 2 Small Christmas Cards | 53 Christmas Seals |

Each of these articles is handsomely lithographed and embossed in many colors. This is the most exquisite assortment you have ever seen. The coloring and designs are typical of the Christmas season. You will want the seals to paste on your Christmas packages, the cards to enclose with your Christmas presents, and the Christmas and New Year post-cards to send to your friends with glad holiday tidings.

New Year Calendar

BESIDES all the other things, you will find a beautiful 1914 panel calendar in your Surprise Box. This is the daintiest calendar we could find anywhere. It is panel shape, sixteen inches long, four inches wide and contains the portraits in colors of three lovely American girls. This calendar alone would be a mighty nice present, but it is in addition to all the other things you will get in your Christmas Box. Our supply of Surprise Boxes is necessarily limited, and you should send in your order within the next two weeks, else you may be too late.

How to Get It All Charges Prepaid

Offer No. 1

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Farm Notes

Violence vs. Profits

By Doss Brittain

IF THERE is one place in the world where loss of temper means loss of money to a greater degree than another, it is certainly the farm. Out in the throng of people where man deals with man, where the harsher edges of human nature are rounded by opinions of others, there is little danger that the most violent of natures will not be tamed down to reason. Loss of temper there means loss of friends, loss of business, loss of money, loss of influence. Violence is not tolerated. There is ample means of redress. Each man deals with his fellow man, whose rights he is bound to respect.

On the farm it is different. The farmer and his family are a small royalty which rules over a realm of lower beings. The horses, cattle, sheep, hogs, chickens, are all subjects of a small absolute monarchy, of which the farmer and his family are rulers. The comfort, nay, the life itself, of these poor, dumb, defenseless creatures is in the hands of man. They are in his power to do with as he pleases. If they are well treated, they treat him well;

by their lives and by their deaths they provide him food and raiment. They, more than any other thing on the farm, provide him money with which to secure the blessings of civilization. Upon these, the lowly creatures of the earth, man has risen to his present high state of development.

Just as a monarch is powerful when his nation is prosperous and his subjects happy, so does the contentment and welfare of the farmer's live stock promote his prosperity. This the farmer generally knows when he is not in a passion of anger. Then he often loses sight of rational considerations, and treats his live stock with violence and cruelty.

The work of a minute will undo the work of years. A young man had worked long and hard for a beautiful mare. He finally came into her possession. He was proud of her, but one day he was in a hurry to take a trip with her. As he started to lead her into the barn she pulled back. He jerked her, causing her to catch her foot in a stump in the barn-lot. She fell and broke her leg. A pistol-shot necessarily ended the sufferings and the life of a beautiful young animal that otherwise might have lived many years of usefulness. And the young man grieved.

Another farmer had cared and watched over the development of a fine heifer. She brought a good calf and proved to be a fine milker. One night he attempted to milk her in the lot. A few shucks lying loosely about furnished the incentive for her to reach for them and she took a few steps. The farmer was in a hurry, lost his temper and kicked the cow in the udder. Being unmilked, it was distended to the utmost. The cruel blow destroyed her usefulness as a milch cow and she was sold to the butcher. That one blow destroyed the years of careful work, and it was the act of a moment.

The only safe rule on the farm is: never use violence in dealing with live stock.

The Old Line-Fence

By C. E. Davis

IONCE heard a noted lawyer say the most tedious vindictive lawsuits and bitterest feuds between families started over an old line-fence not worth a dollar in the beginning. Men with fine farms, worth thousands of dollars, will quarrel bitterly over a paltry barren strip of ground a foot wide!

The soil along side a line-fence is seldom accessible, and usually is weed-grown and set with bushes. Each owner refrains from mending it lest he do more than his share; and so the line-fence is the worst on the farm.

Hardly one owner knows the real beginning or location of his rightful boundary, and yet will get into a swearing rage and nurse hatred and bitterness for years if his neighbor's fence juts over a foot on his land; or if the hungry cattle break over the flimsy barrier to the green fields of Jordan.

How much better to combine and say, "Here, I'll furnish half the wire and posts, and help make the fence, if you will fur-

nish the other half. The ground isn't worth a blue bean, and so we'll strike a line as near as we can get, and let it go at that. If part is too much on me, never mind; if too far on you, call it square rather than quarrel about it."

Have the line-fence a stout one. No barbed wire, for it may ruin some fine animal. Galvanized No. 9 wires, well staked, with five wires, will do. Four wires make roguish cattle, but five will be effective.

I wouldn't be annoyed by other people's cattle for the cost of the fence, nor let mine disturb anyone else; and I've got about two miles of it to make, around and across and between.

Any compromise is better than to let a line-fence case go to law, for such a case is a lawyer's joy. Better pay for the land the fence is built on than have any ill feeling about it.

Do You—

By R. E. Rogers

LOOK after the loops on the thills that hold the hold-back tugs in place. I neglected them last winter and just escaped a runaway caused by the hold-back strap slipping back and letting the cutter run up against the horse's heels. Better put a five or six penny nail into each one while you think about it.

Use the old kind of bolt snap on the horses' halters? They will get loose sure pop in time. Try a few of the twisted wire snaps. They never come unsnapped.

Know that a pair of sheep-shears are about the best sort of clippers for manes and foretops to be found?

Simply Common Sense

THERE is a farm in central Ohio which is noted for its fine hogs. There are always from one hundred and fifty to three hundred good porkers on it. Cholera has raged all about it, but there has never been a case on the farm. It is a farm of over a thousand acres. No water is used from any source outside the farm. So no infection can come in the water the hogs drink.

One day a neighbor came wandering through the place. The owner halted him, and asked him whether the report was true that he came from a farm infected with cholera. The neighbor admitted that his hogs were dying of it. "Then get off my place!" said the owner. The neighbor grew huffy. "Well," said the owner, "you wouldn't come into my house if you had smallpox, would you?" "No, of course not!" "Well, then why come into my fields when you come from a farm that's infected with cholera? We are always glad to be neighborly, but we can't afford to pay for calls with our herd of hogs." The neighbor admitted that this position was correct, and went away feeling perfectly satisfied.

These hogs run in pastures, but the pastures are exceptionally situated. The Minnesota sanitary board recommends that when cholera rages the hogs be kept in small dry pens. "Keep your dog tied," they add; and they might say, "Shoot every dog when he crosses your line-fence." Disinfect the troughs daily with a five per cent. solution of carbolic acid. No hog can legally be taken from any stock-yard except for slaughter, and breeding hogs when shipped should, of course, be crated and kept out of the stock-yards. And when one is brought on the farm from outside it should be kept by itself for at least two weeks. It will pay to put a boy out with a gun during daylight hours to shoot at, and kill if possible, every pigeon, crow, mourning dove and English sparrow in sight. They all carry germs from farm to farm. And don't let the hogs drink from running streams or surface water originating outside the farm. Treatment is a good thing—but it is better never to need it.

A sample of "temperine" purported to be a temperance beverage, and claimed by the label to contain less than one-half of one per cent. of alcohol, was found by the Pure-Food Department to contain nearly three per cent. of alcohol; enough to be intoxicating. Moral: Always read the label, but everything on it is not necessarily true.

Pulling Stumps with Jacks

By E. M. Best



THE illustration shows a cheap, effective and powerful stump-pulling device. The outfit consists of two jacks of about a one-and-a-half-foot lift, a stout chain, a stout beam about eight feet long and two pieces of plank for the jacks to rest on.

Place the beam across the top of the stump you intend pulling and one of the jacks at each end and as close to the stump as the roots will permit. Fasten a strong chain around the beam and the largest root of the stump. A man at each end operates the jacks and pulls the stump. Two men can pull twenty-five to fifty a day. This puller is not patented.

Styles in Heroes

By G. Henry

OUR style of heroes is changing. With increasing age (and wisdom) we have ceased worshipping at the shrines of warriors—who, after all is said and done, are nothing more than survivors and heirs and emulators of the biggest, most brutal of our cave-men ancestors.

For instance, it is quite certain that one hundred years from now there will be more statues in the public square erected to the memory of Tom Edison than to Hiram Maxim.

Edison has helped and delighted millions, Maxim has invented guns to kill thousands, and we are beginning to understand the difference.

Our silly worship of Napoleon Bonaparte is turning into tender reverence for Doctors Loreuz and Pasteur and the Curies.

It is merely a matter of turning from DESTROYERS to BUILDERS.

Not so many years will pass before little boys will puzzle papas by asking:

Why did Germans hate Frenchmen?

Why did people spend more for battleships than for schools?

Why did they put PATRIOTISM in their religions and then fight about it?

Parcel-Post Hampers Needed

By Maurice Floyd

IN SPEAKING of how mail matter is handled, a postal employee recently said: "Mail is not handled piece by piece as express matter is, but it is handled almost entirely in bags. These bags are often stacked clear to the eaves of the car, thus sometimes throwing a weight of several tons on the bottom layer; consequently fragile packages are likely to go to smash and we are accused of carelessness."

No doubt in time strong hampers will be provided in which parcel-post packages may be carried with safety no matter how high they are stacked; but until this improvement is made farmers can secure satisfactory service by hearing in mind the trying conditions under which this class of mail is now handled and packing their produce accordingly.

Binder-Twine and Rodents

By Fred Telford

THE depredations of rats and mice in binder-twine cause the farmers of the grain belt a great deal of trouble. There is often need of storing the surplus from season to season, and frequently the twine is bought in advance of the time it is needed, to secure the cheaper price. It is generally a problem to keep the stored twine out of reach of the rodents.

A farmer who had suffered considerable loss in this manner discovered a method of protecting his twine. At the time he stored it he sprinkled it freely with sulphur, and it was left entirely undisturbed by the troublesome rodents.

The Girl and the Auto

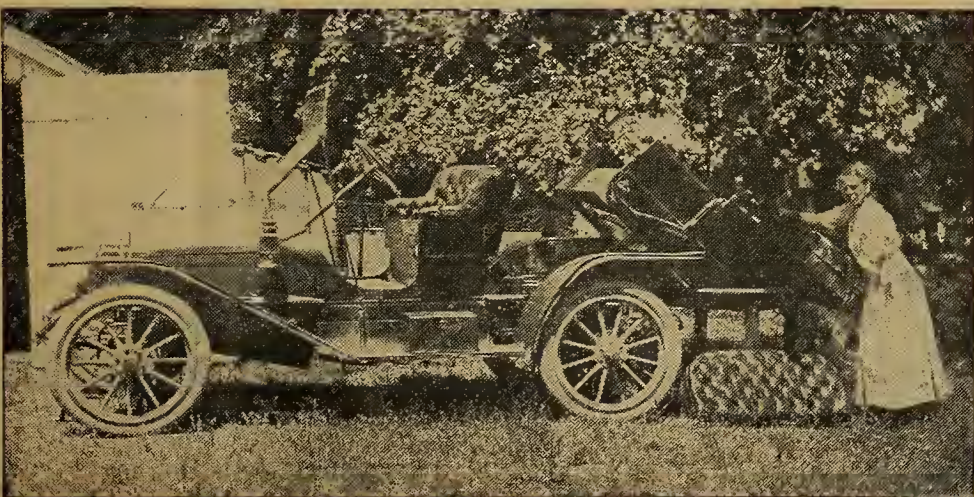
By Vinessa Full

WHEN my brother was at home he ran the machine, but when he decided to go away it fell to me to be the chauffeur. I was a little nervous at first, but after I became accustomed to the car I ran it with less expense than he.

I am fully convinced that a light car is better for a woman driver than a heavy one, and that any woman can drive, and drive well, if she studies the machine. I drive more carefully than my brother, and consequently have very few repair bills. I have learned to do everything about the machine from putting on a tire to taking off and putting on the back seat.

When we wish to make a truck out of it I take the back seat off. We haul crates of poultry, cases of eggs and anything else that must be taken to or from town.

I have a table just a little lower than the bed of the machine. I back the car up to this, unfasten the bolts that hold the back part of the body on, and tip the seat, top and all back onto the table. When I want to put it on again I back up close to the table and lift up on the top. The top is quite a help in loading because it gives me a better leverage.



The table holds the seat while the auto is used as a truck

I recently had an experience with my lights that may be of some value to someone. The lights flickered and nearly went out when the engine was running, but when the engine was dead, the lights burned. I opened the hood and discovered that when I moved the pipe that runs from the tank to the lights the lights burned properly. Later I discovered that there was a leak in the pipe, and when the engine was running the fan sucked the gas out of that leak. A little solder soon repaired the trouble.

Some women don't like to crank up, especially on the street. I have learned a way to fix the engine so that it will be self-starting even after it has stood several minutes. I turn off the gas and the spark and shut off the magneto. Then while the engine is dying I turn on the gas and the spark levers again, but do not turn on the battery, nor the magneto. When the engine is dead I turn off both the gas and spark levers. In starting I turn on the battery, and then turn on the gas and spark levers, and the engine starts itself.

A Successful Round Barn

By John E. Taylor

ON THE Shrewsbury farm, in Maine, a round barn, probably the only one in the State, has been recently completed, and has been found to be of more service than a rectangular barn of equal capacity. One of the greatest advantages is the saving of labor and time when taking care of stock.



He believes the round barn is economical

The owner of this farm, J. L. Dean, a civil engineer, before deciding upon the kind of barn he would build, began to figure out what advantages a round barn had over a rectangular barn, and how the cost would compare. The barn, with everything reckoned, cost about \$5,000, but Mr. Dean had men employed as carpenters that never built a structure of this sort, and of course some extra expense and labor became necessary. Mr. Dean now claims that he can build the same barn for \$4,500.

The barn is fifty feet in diameter, and so arranged that the tie-up (cow-stable) is on the outside all around the barn, excepting an entrance, that enters the feed-floor. In the center, on the ground floor, is a concrete silo that runs to the top of the barn. There is another floor (above the ground floor) which is used as the hay-loft, and the driveway to this leads over a concrete milk-room. The main floor extends completely around the barn in this loft, with the silo running through the middle.

The boarding material of the barn is fir, and matched. The roof is also of matched boards, and covered with an asbestos paper. This is painted with lead and oil, though this is not usually the custom with this kind of paper. Mr. Dean would prefer galvanized iron if it could have been cut in the right shape, but the asbestos paper is claimed to last indefinitely.

Mr. Dean devised a ladder that attaches onto a track at the peak of the barn where the ventilator is, that extends to the eaves and can be run around the entire roof of the barn for anything that might demand attention on the roof.

The barn has a concrete tie-up and silo of the same material up to the second floor, and from there to the top the silo is made of cement blocks. The underpinning of the barn is of cement and goes into the ground six feet. Under the silo is a cold-air space to take the place of a refrigerator, which is in the form of a cellar. The silo is twelve by forty-eight feet and is filled from the top of the barn by a carrier.

One of the advantages that Mr. Dean considers of great value is that the stable floor has no air space underneath, and so the cattle in winter are kept warmer.

The fodder capacity of the barn is for sixty head of cattle, including the silage. The animals face inward, and the feeding space, which is the ground floor, is in front of them. The cattle are fed directly from the silo, there being several apertures in the silo for this purpose. The stock are fed with hay through individual trap-doors from the hay-loft, thus dropping the fodder to the lower floor in front of the cattle.

The manure is taken from the tie-up in litter-carriers that run around the barn, two carriers passing out onto a projecting track beneath a shed, and this is dumped into a manure-spreader, and as this is filled up it is immediately hauled to the field. In the winter-time the same thing is done, excepting the manure is dumped into a concrete container and later hauled out.

The upper floor in the hay-loft is largely lighted from windows and the entrance, but is supplemented by electric lights running from the electric plant of the near-by town. The hay is carried into the loft by a grab-fork and is distributed on a circular track that runs completely around the roof, the hay being dumped at any place desired. The entrance to the upper floor is over the roof of the milk-room, which is of poured cement.

The power used for the silage-cutter and for other purposes is electricity. A small dynamo is used.

This farm is run as a dairy and produce farm, whole milk being sold in the city. A store is owned there by parties that co-operate with this farm in the sale of its products.

The Trick Turned

A CROWD of men were trying to unpack a machine which was screwed into the crate with big screws. One screw's head split, and the side broke off with the strain of the screw-driver. Nobody knew how to get it out. It was too large to yield to ordinary persuasion. An agricultural college student came along, took a claw-hammer, applied it to the half screw-head as if meaning to pull the screw—and turned it out in a moment. The boy went on, leaving the fellows who had been stumped looking rather foolish. A good trick to remember.

Some people believe that a "water-witch" can find where water runs underground by using a divining rod of witch-hazel or a peach-bough crotch. This is a popular error; but an Arizona observer has found out how to tell by the mesquite whether water is near the surface or not. When the mesquite grows up into tree form the ground water lies within fifty feet of the surface, but if it remains a shrub prospects for finding water are not so good. We are always learning that every natural phenomenon has meaning for us, if we can only read the meaning.

Cleaning Up the Past

By P. C. Grose

INDEED, the rail fence is a thing of the past. No new ones are being built, unless it is from the most substantial remains of others that have been torn down. But any farmer who has ever removed an old rail fence knows that there remains a lot of distressingly plain evidence that something is of the "past"; and by the time the row is spick and span, ready for the new fence, he is vaguely aware that a lot of energy has also "passed."

Our practice when an old rail fence is removed is to gather the chunks, vines, etc., into piles and burn them. We then aim to plow up the strip and farm it a few years, if possible. As the strip is worked, all roots, chunks, etc., are collected and burned. It is to get rid of these that we do the work. If the fence-row is worked at the same time with the adjoining land, we take special care to have none of the roots, tubers or runners drawn out and allowed to start a growth in this ground. If a fence is absolutely necessary at this place, one of woven wire can be strung temporarily back a short distance from the row. With the new steel posts which are so easily set, the extra labor involved in constructing the temporary fence is but a small factor.

After the strip of ground is thoroughly worked it should be planted to some hoed crop, so as to keep the weeds and sprouts down. The soil is usually loose and fertile and produces a luxuriant growth. Potatoes are a good crop for this purpose where the soil conditions are propitious to their growth, as their frequent tending is what the ground needs. We usually grow corn, however, as this is one of our main crops. We figure ahead and aim to remove a fence at that period of the rotation when one of the fields adjoining it goes into corn.

Wheat follows corn, then grass, at which time it is well to set the next fence, if it is required. If the grass crop is mixed clover and timothy, an extra heavy application of timothy-seed should be given this strip, as it holds better and makes the best sod.

Such a preparation of the row tends to keep the wire fence from being grown over and about with vines and shrubs as would otherwise be the case, and which makes the farm look so untidy and unkempt. The crops contribute wholly or partly in compensating for the time and labor expended.

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Crops and Soils

Two Corn-Root Worms

IN THE South there is one corn-root worm, and in the North another. Both are very destructive, and all corn-growers should make a study of them in their own neighborhoods.

The southern corn-root worm is most unpleasantly known in the Carolinas, Tennessee, Arkansas and Oklahoma. The adult beetle is a greenish-yellow insect with twelve spots, and reminds the beholder a good deal of a striped cucumber-beetle. It attacks alfalfa, all the small grains, the field legumes, buckwheat, the sorghums and grasses, millet and rape, as well as corn.

It has cost the farmers of the South thousands of dollars a year for a long time. Its favorite land is the low, damp "black lands," and it is fondest of the young growing corn. It eats into the heart of the young corn just at the top of the ground. The eggs are laid soon after the first warm weather of spring, and in an ordinary season it does most of its damage in March and April. There is a second brood of young in June and July.

About the only thing the southern corn-grower can do, it seems, is to plant his corn at a time which will let it through the young stage between these two broods—that is, to have the corn start in the latter part of April, and get out of the way of the worms in May.

The natural enemies of this insect are the quail ("partridge," it is called in the South), California quail, prairie-chicken, wild turkey, yellow-bellied sapsucker, red-headed woodpecker, night-hawk, king-bird (sometimes called the "bee-martin" in the South), red-winged blackbird, oriole, rose-breasted grosbeak (often called the "pea-bird"), cliff-swallow, and probably all the swallows, and robin. Take good care of the birds, and provide them with nesting-places.

The northern corn-root worm in adult form is also about the size of the striped cucumber-beetle, has black eyes, and is of a yellowish-green color. When the corn is in silk and tassel this pestiferous citizen of the corn-field may often be seen eating the silks or the pollen of the tassel. Sometimes they are lured into the house by the lamplight.

It is one of the most destructive of corn pests; but no man who will rotate his crops need ever be seriously troubled with it. It works on the crop where corn follows corn, and not elsewhere.

It is therefore one of the easiest of pests to control. Unless the field is overflooded so as to make it necessary to plant corn after corn, the man who loses by the northern corn-root worm has his own bad management to thank.

Corn-growers in the North will do well to write the United States Department of Agriculture for Bulletin No. 8, and southern farmers for Bulletin No. 5. These will give full information.

A Man, a Farm, the Results

A West Virginia Experience That Will Interest Homeseekers

By A. J. Legg

HOW much land can one man properly care for and cultivate profitably? Much depends upon the man and his environment. Farming looks easy to the city man who has had no experience in producing what is needed for a small family on a few acres of land. But the man without experience is very apt to make costly mistakes. The products of the farm may be lavished upon the cows, but they may not fill the milk-pail to overflowing because of lack of good judgment in feeding and care. The horses may be fed enough to keep them well, and yet on account of some mistake in the care and feeding they may not thrive.

Some twenty years ago a coal-miner who had saved up considerable money bought a farm near mine here in West Virginia. He still had a surplus of cash on hand after his farm was paid for, but he lacked experience and business judgment. In a very few years his money was gone, and he had to return to the mines to make a living.

A few miles from here, in an adjoining county, there are many farms of from thirty-five to fifty acres each that support families in comfort. These farms produce corn, wheat, oats, potatoes and fruits sufficient for home use, and also hay and some pasture-land. However, in most instances there is some forest land not enclosed which furnishes range for a part of the stock during the summer-time. Sometimes only one horse is kept by each of two near neighbors, and they double teams in order to do heavy work or to go to market. Those who keep a team of horses can often get work for their teams at good wages when their own farm work is not pushing. Usually from two to four cows are kept, and they produce a little surplus of butter, and the calves are sold at a good price. Some keep a brood-

sow, while others buy two or three pigs and keep them mostly on buttermilk and leftover scraps from the table. Two hogs well kept for a year will yield enough pork for an ordinary family. A flock of from thirty to sixty heus is kept, and this yields a surplus above what is needed for family use. Then a surplus of potatoes, apples, onions and other vegetables are produced and sold at the mining towns at good prices.

While I am writing, my neighbor, who has grown peaches and strawberries in a small way, comes in and tells me that he has produced a surplus of strawberries each year which has netted him from thirty to sixty-three dollars, from one eighth of an acre of fairly good soil; also, that he sold as much as one hundred dollars' worth of peaches from two acres of peach-trees, above what was used by a family of six persons.

Success on the farm depends on—you know as well as I do. Perhaps you've tried it too.

Dollars in Manure

By Chesla Sherlock

WE ARE told that there are 20,000,000 horses and mules in the United States, 62,500,000 cattle, 50,000,000 hogs and 50,000,000 sheep. A horse will discharge, aside from what is lost on the public highways, seven pounds of nitrogen, thirty-five pounds of phosphoric acid and seventy pounds of potash. Counting these elements at their market value, every horse and mule in the United States annually produces \$16 worth of manure, or for the total number of horses and mules the value of the manure given is \$320,000,000.

In the course of a year the average farm cow will produce about one hundred pounds of nitrogen, seventy pounds of phosphoric acid and one hundred and five pounds of potash. Calves, of course, do not produce nearly so much, but it is safe to say that the average amount produced by every calf in the United States is fifty pounds of nitrogen, thirty-five pounds of phosphoric acid and fifty pounds of potash. At the market value the value of these elements given by each cow in the country is \$13 per head, or a total of \$812,500,000.

The average hog produces twenty-five pounds of nitrogen, twelve pounds of phosphoric acid and nine pounds of potash in a year. The market value of the elements produced per head is \$5.45, or \$252,500,000 for the total number of hogs in the country.

The average sheep produces twelve pounds of nitrogen, six pounds of phosphoric acid and eight pounds of potash. On the market this would be worth \$2.75. The total number of sheep in the country then produce \$137,500,000 worth of the elements that make fertile soils.

The manure given by poultry is especially valuable and rivals sheep-manure for use on the lawn or in the flower or vegetable garden. Poultry-manure is uncommonly rich in lime.

Galax-Leaves and Holly

By J. A. Robinson

THE western part of North Carolina furnishes a number of beautiful evergreens for Christmas decorations. From the beautiful Blowing Rock section, in the north-western portion of the State, through the mountains to the Tennessee line, the mountain evergreens are bought and shipped to northern markets. In the fall and winter galax-leaves are the principal staple. These leaves are in great demand for Christmas decorations, and the trade is growing. One dealer at Little Switzerland, in the mountains of western North Carolina, last season bought \$1,800 to \$2,000 worth at that place alone, and there are six to eight other merchants within twelve miles of that point who buy the same amount. All these leaves are shipped to the Northern markets, New York and Philadelphia principally.

Local residents, mostly women and children, are busy from the middle of October to the last of November gathering galax-leaves, and this represents as much of an industry to the people of the mountains as the cotton-picking is to the people of the low country.

Another dealer at Little Switzerland gives a demonstration of how this industry is carried on, and the packing of galax-leaves for shipment. He has two rooms, one filled with water-moss, in which the leaves are embedded as he buys them; in the other room they are packed in wooden boxes. There are twenty-five leaves in a bunch, and ten thousand leaves to the case. The cases are lined with waxed paper, then a layer of water-moss, and the leaves packed closely, another layer of water-moss, and waxed paper on top. Balsam and ferns are sold to some extent.

Coming down in the eastern portion of the State, there is a great demand for holly. Hundreds of cart-loads of holly are being cut in Onslow County, and shipped from Jacksonville to the northern cities. Most of the holly is shipped to New York City, which is the clearing-place for it in the East. Hundreds of thousands of trees and branches are sent from the metropolis to many places in the Northern and Middle States and retailed for Christmas.

Five Problems Solved

By W. H. Jenkins

OPINIONS and theories, until they have been tried, have but little value. People want to know facts made so by experiments and demonstrations. Failures and mistakes are too expensive, especially for the farmer who is working with small capital. If he knows what has made good in years of actual practice he has some facts on which to base his work, and he knows if he does likewise, under similar conditions, he can expect like results.

About twenty years ago I was working to get the most in the way of a good living and a good suburban home on my little place in Delaware County, New York. To do this I saw I must learn how to better utilize natural resources and forces. There is an almost infinite storehouse of plant-food in the atmosphere and soil. I saw farmers using only a few inches of the surface and getting little or no nitrogen from the atmosphere. I was told that the alfalfa-plant could send its roots down to the lowest depths of soil for water and mineral food, and could take the nitrogen from the atmosphere and store so much of it in its stem and leaf that one ton of this dried was nearly equal to one ton of wheat-bran in feeding value, but I was also told that I could not grow it successfully outside the limestone soils. On the ordinary alluvial non-limestone soil of Delaware County, New York, twenty years ago I began to grow alfalfa, and have grown it successfully on every part of my place. I have proved that the ordinary drained soil, with a fair depth, can be made to grow good crops of alfalfa without fail, when all the conditions are faithfully complied with. I have found the growing of alfalfa on a small place where intensive small farming and gardening is practiced has enabled me to keep cows and poultry with a profit on small areas, where it would be impossible to do so without; that there is no soiling crop on the earth that approaches alfalfa in value, as it produces four crops a year, that aggregate six to eight tons of dried matter; that the green alfalfa, used to supplement a very small pasture for cows, will maintain the flow of milk beyond what it is possible to do with other food, and with no cash outlay. More than this, alfalfa is changing the character of my soil by filling it with large roots to its lowest depths, which improves its mechanical condition. Crops grow well in alfalfa soil with little or no fertilizer. Our table is furnished with alfalfa transformed into milk, cream, butter, cheese, eggs, fruits, vegetables—all the good things from the soil.

We Sow Alfalfa in Spring

One thing I have settled upon is that in the latitude of New York alfalfa should be sown in the spring, as soon as the ground can be got in good condition; also, that at least one ton of stone-lime per acre is needed on average soil, or twice the amount of air-slaked or ground lime; that inoculation with alfalfa bacteria is needed; that a nurse crop of one-half bushel per acre of barley is better than sowing without a nurse crop, first sowing the barley, which is harrowed in, then pure alfalfa (better acclimated seed), thirty pounds to the acre, and rolling or planking the ground.

It is no longer a question as to the value of corn and soy-bean ensilage, for it has saved dairy farmers a large part of their grain-bill. Because of the protein content in the soy-bean vines, pods and beans, the ensilage is more nearly a balanced ration. No extra work is required in growing soy-beans with corn, as the beans are mixed with the corn, about one third in propor-

tion, but planting one quarter to one third more of the mixture per acre. The seeds, well mixed, can be planted with the ordinary horse corn-planter or grain-drill. It may be more trouble to run the corn and soy-bean vines through the ensilage-cutter, but it can be done, and they are well worth all the extra work, for one New York farmer with soy-bean ensilage cut out his grain entirely, with average results in milk production.

Kill the Quack

I think some farmers will wish to know how to eradicate quack-grass without long cultivation and hoeing. Because of neglect I had several large plots of quack on my place. We tried to destroy by plowing frequently and harrowing, and we tried to hoe it between cultivated crops, but almost the next day after cutting it off it would spring up. There was a thick mass of roots in the soil the plow could hardly penetrate. This year I decided to fight the quack by sowing on the infested ground a counter crop and let the vegetable growth do what we had failed to do with cultivation. The quack-field was plowed early in the spring, harrowed and reseeded later. Then it was harrowed once a week until June, until the surface soil was a fine seed-bed. A few inches below there was a thick mass of quack-roots that would cover the surface with grass in three or four days if left alone. Buckwheat was sown, about two bushels per acre. This soon came up and covered the ground. The soil was rich, and it grew so rapidly that it got the best of the quack in the struggle to occupy the ground. In a month or two there was such a heavy, thick growth of huckwheat-straw that not a spear of quack-grass could grow up through it, and the pest was smothered and destroyed root and branch. It was much easier to let the huckwheat overcome the quack than to fight it with the hoe and cultivator.

Is Pasturing a Delusion?

One more fact we New York farmers are learning. It is that the average pasture is a delusion. It partly feeds the cows for a month or two early in the summer, then dries up, and to keep up the flow of milk the dairy farmer must feed nearly a full winter ration of forage crops and grains. There is a method of mending old pastures grown up to briars, ferns, etc., that has proved to be the right way with us in New York. A portion of the old pasture is top-dressed in June and July with manure made by stabling cows in well-bedded and ventilated stables. With very little clipping the weeds are killed and the grass comes on, and here I will suggest it is a good plan to scatter grass-seed through the manure in the gutter before drawing it out. Less area in pasture, reforesting steep rough hillsides, and keeping the pasture we have as clean as meadows, and supplementing in late summer with a reserve of ensilage, alfalfa, clover, oats and peas, green corn, etc., means to keep up the full flow of milk the cow is capable of, without cash outlay.

Making the Break

[CONTINUED FROM PAGE 4]

is meat for one is poison for another, or else neither knows what he wants.

A Farmer Wants a Railroad Job

"I have read with much interest your letter in FARM AND FIRESIDE, in which you state you desire to go on the farm. I own a farm of 328 acres, about 100 acres of which is good farming land.

"My desire is to become a railroad fireman. I am a graduate of the American Railway Educational Association course on firing locomotives. Now my proposition is that if your husband, who is an engineer, could get me a place firing on some good railroad I would be willing to let him work my farm on the shares. Of course I would furnish team and implements. I have had several years' experience with boiler and engines of different kinds. I have plowed with steam traction-engines. I am willing to work hard and would want a steady job, as I have a wife and several children to support."

There are two basic troubles which confront the family which, either in the city or the country, wants a farm and hasn't the money to buy one. The first is the high price of land, the second is the fact that there is no way in which they can know where opportunities exist. That they do exist is made perfectly plain by the letters printed in this article. There are thousands of them—but demand and supply are widely separated. The problem is to bring them together. Whether they can agree on terms when brought together is an additional problem. But the city man who goes on a farm must have his head free from rainbow dreams and must be willing to work with hands. The opportunities in the country for a man with little capital are not alluring, but they are about equal to opportunities in the city. Living in the country or city is chiefly a question of personal choice.

Shallu, or Egyptian corn, is a grain which is said to have yielded for one Nebraska farmer seventy bushels to the acre in a very dry year. The grain has good feeding qualities.

Fountain-Pen For a Favor

Everyone needs this Fountain-Pen. Farm and Fireside has obtained for its readers a reliable Fountain-Pen. You can get one by doing a small favor

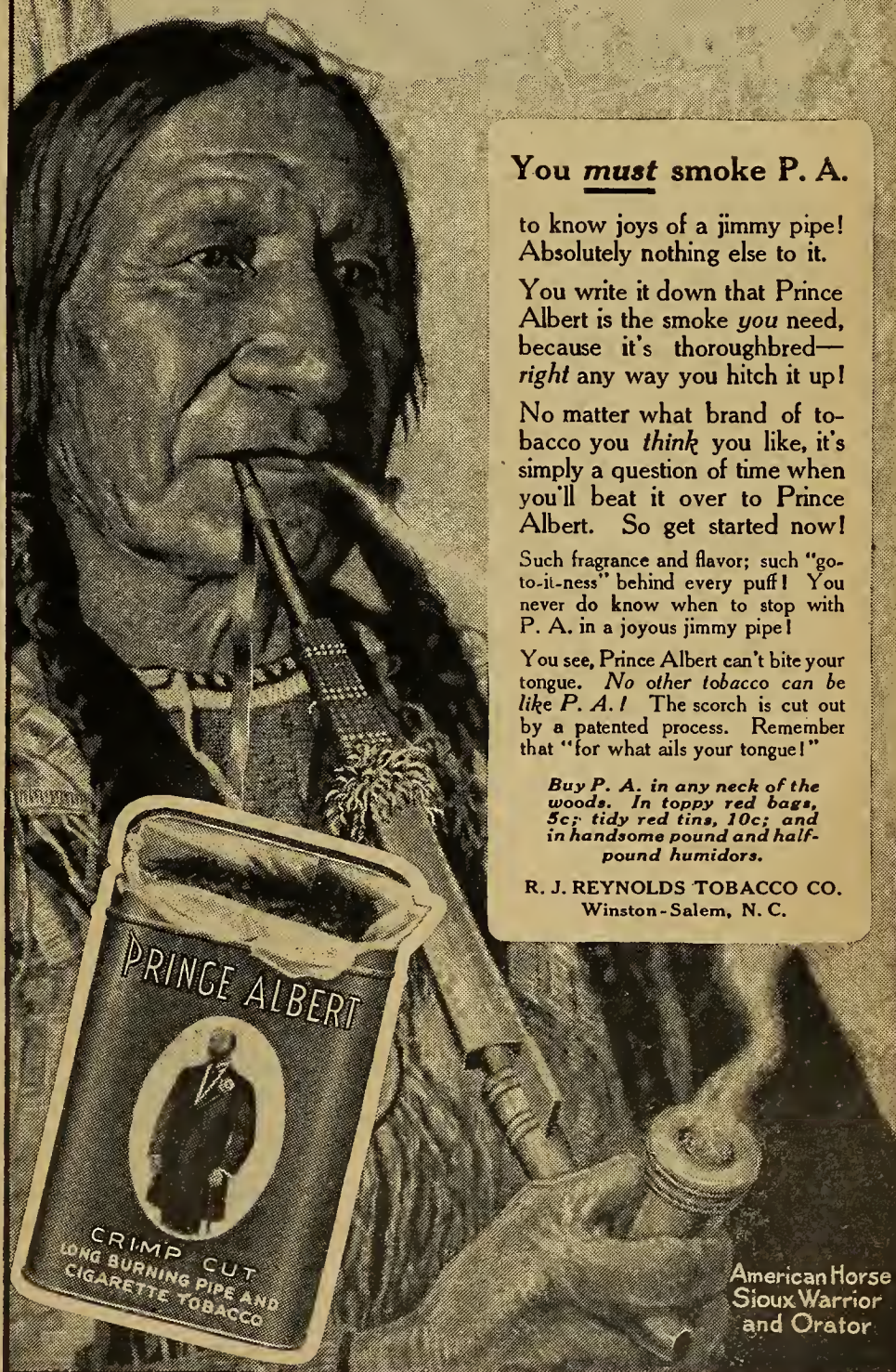
THIS reliable fountain-pen is one of the best pens made for usefulness and wearing qualities. It has a fine, well-made, gold-tipped pen. It is made of vulcanite, which is like hard rubber. There is a close-fitting dust-cap to protect the pen-point. For steady use this pen is hard to beat. It is easily filled, and a filler is furnished with each pen. The special feature of the reliable pen is its free-flowing ink, requiring no shaking. You will have use for this pen many times a day. It is one of the most convenient pens that anyone could have and is fully guaranteed.

OUR OFFER We will send you this wonderful fountain-pen by return mail if you will send us only four 1-year subscriptions to Farm and Fireside at 35 cents each. Tell your friends that this is a special bargain offer. Send subscriptions to

FARM AND FIRESIDE
SPRINGFIELD, OHIO

PRINCE ALBERT

the national joy smoke



You must smoke P. A.

to know joys of a jimmy pipe! Absolutely nothing else to it.

You write it down that Prince Albert is the smoke *you* need, because it's thoroughbred—right any way you hitch it up!

No matter what brand of tobacco you *think* you like, it's simply a question of time when you'll beat it over to Prince Albert. So get started now!

Such fragrance and flavor; such "go-to-it-ness" behind every puff! You never do know when to stop with P. A. in a joyous jimmy pipe!

You see, Prince Albert can't bite your tongue. No other tobacco can be like P. A. The scorch is cut out by a patented process. Remember that "for what ails your tongue!"

Buy P. A. in any neck of the woods. In tippy red bags, 5c; tidy red tins, 10c; and in handsome pound and half-pound humidors.

R. J. REYNOLDS TOBACCO CO.
Winston-Salem, N. C.

American Horse
Sioux Warrior
and Orator



Waiting for the Railroad

THOUSANDS of farmers on the frontiers of western Canada are anxiously awaiting the coming of the Grand Trunk Pacific Railway, a "Farthest North" line which will extend from Halifax to Prince Rupert, almost at the Alaska line, on the Pacific Ocean. In the remote sections large quantities of farm products are being held for transportation. The photograph shows one thousand tons of haled hay, piled out of doors, awaiting the advent of the first freight-train over the partially completed line. The railroad is now a necessity.

EDMUND G. KINYON.

DON'T BUY POWER TO

run your pump, grinder, threshing machine, saw outfit, sprayer—irrigation outfit, or any other machine until you investigate *The United States Engine*. It reduces the expense of fuel from one-half to one-third—its steady, unbroken power saves wear and tear of the machine it operates—

30 Days Free Trial under a Guarantee that is absolutely reliable.—1½ horse power, 2, 3, 4, 5, 6, 7, 8, 9, 10, 12, 15, 18, 20, 25, 30, 40, 50 and 75 H.P. Now ask us to explain how a United States Engine will pay for itself. (This is our 59th year in the Manufacturing Business.)

UNITED STATES ENGINE WORKS, 421 W. 15th Street, CHICAGO

FAMILY OF FIVE All Drank Coffee From Infancy

It is a common thing in this country to see whole families growing up with nervous systems weakened by coffee drinking.

That is because many parents do not realize that coffee contains a drug—caffeine—which causes the trouble. (The same drug is found in tea.)

"There are five children in my family," writes an Iowa mother. "all of whom drank coffee from infancy up to two years ago.

"My husband and I had heart trouble and were advised to quit coffee. We did so and began to use Postum. We now are doing without medicine and are entirely relieved of heart trouble.

(Caffeine causes heart trouble when continually used as in coffee drinking.)

"Our eleven-year-old boy had a weak digestion from birth, and yet always craved and was given coffee. When we changed to Postum he liked it and we gave him all he wanted. He has been restored to health by Postum and still likes it."

Name given by Postum Co., Battle Creek, Mich. Write for the little book, "The Road to Wellville."

Postum comes in two forms:

Regular Postum—must be boiled.

Instant Postum is a soluble powder. A teaspoonful dissolves quickly in a cup of hot water and, with cream and sugar, makes a delicious beverage instantly. Grocers sell both kinds.

"There's a reason" for Postum.

I Ask Only \$1.00

Send for Free Book on Cleaning and Grading Grain. Then ask for the size machine you want, send \$1.00 and I'll ship 1914 Model Chatham, freight prepaid, with special screens and riddles for all Grains, Grasses and Weed Seed where you live. Give it a month's hard test. If not satisfied, send it back and get your \$1. If satisfied, pay me any time before 1914.

CHATHAM Grain Grader and Cleaner

Handles all grains and grass seeds; takes out weed seed; separates mixed grains; leaves big, pure seed. Over 300,000 Chathams in use, and every owner satisfied. Write a postal now for my FREE copy. Buy from the factory direct. Other styles of Poultry, Farm and Lawn Fencing. Large Catalog Free. Write today. Box 271 Kitzelman Bros., Muncie, Ind.

MANSON CAMPBELL handles all grains and grass seeds; takes out weed seed; separates mixed grains; leaves big, pure seed. Over 300,000 Chathams in use, and every owner satisfied. Write a postal now for my FREE copy. Buy from the factory direct. Other styles of Poultry, Farm and Lawn Fencing. Large Catalog Free. Write today. Box 271 Kitzelman Bros., Muncie, Ind.

MANSON CAMPBELL CO.
Detroit, Kansas City, Minneapolis

All BIG Wires

One Penny For a DOLLAR-SAVING Book

Gives valuable fence facts—shows how to get better quality at sensational direct-from-factory prices.

EMPIRE FENCE

is guaranteed to show the biggest saving on highest quality fence. Freight prepaid. All Big No. 9 wires, Open-Hearth steel, heavily galvanized, rust proof, pig tight, stock strong. Just a penny postal brings Free Book—NOW.

BOND STEEL POST CO., 42 E. Maumee St., Adrian, Mich.

POULTRY FENCE

22 1/2 Cents a rod for 48-inch fence. 22 Fewer posts and no base board or top rail required. Buy from the factory direct. Other styles of Poultry, Farm and Lawn Fencing. Large Catalog Free. Write today. Box 271 Kitzelman Bros., Muncie, Ind.

FARM FENCE

FROM FACTORY TO FARM

26-inch Hog Fence, 14c.
41-inch Farm Fence, 21c.
48-inch Poultry Fence, 22 1/2c.
30-rod spool Barb Wire, \$1.55

Many styles and heights. Our large Free Catalog contains fence information you should have.

COILED SPRING FENCE CO., Box 18 Winchester, Ind.

ORNAMENTAL FENCE

25 Designs—All Steel

Handsome, cost less than wood, more durable. Don't buy a fence until you get our Free Catalogue and Special Prices.

We can save you money.

Kokomo Fence Machine Co.
427 North St., Kokomo, Ind.

Sew Anything

Leather, canvas, shoes, harness, saddles, buggy tops, etc. Any material, any thickness. Myers' wonderful Sewing Machine makes leather, too, quick, easy. See that real! It keeps the tension right. Asura Warren, Big money.

G. A. MYERS CO., 6326 University Ave., Chicago, Ill.

Detroit Kerosene Engine

Saves Time, Trouble, Expense

The Detroit Kerosene Engine is the simplest and most powerful engine you ever saw or heard of. Direct transmission of power with 3 moving parts only—no useless cams, gears or valves to take up power or get out of order. No trouble—no extra expense. Starts without cranking.

Runs on Cheap Kerosene

Will run on distillate and gasoline; but kerosene costs less than half as much as gasoline. Besides, kerosene contains more heat units than gasoline. Result—more power—steadier power—at one-half the expense of fuel. Comes to you all ready to run feed grinders, separators, pumps, saws, electric light plants, etc. All sizes in stock ready to ship.

GUARANTEED 5 YEARS—Sent on trial direct from our factory at lowest factory prices. Don't buy an engine until you have seen the "Detroit." Write today for catalog and agent's special introductory price on first order from your territory. (183)

Detroit Engine Works, 133 Bellevue Ave., Detroit, Mich.

The Ohio Rural-Credit Plan--Continued from Page 5

credit. All of the officials interviewed believe that these credit institutions, as now conducted and under the regulations now generally prevailing, are peculiarly well adapted to furnishing favorable farm loans.

They contend that the expense of conducting the business is as small as a safe co-operative loan enterprise can be successfully carried on.

Here's What Was Actually Done

As a concrete example, note the following statement at the date of the last report (August 1, 1913), made by the Security Building and Loan Company heretofore referred to:

Non-borrowing members 1,522
Depositors 94
Borrowers 236

Total members 1,852

Total annual salary of officers....\$1,300.00
Total annual salary of directors.. 652.00

Total salaries\$1,952.00

The secretary of the Defiance Home Savings and Loan Association and of the Security Building and Loan Company of Defiance County went into the subject exhaustively and showed from books of record and by explanation just how their business is conducted.

Mr. K. V. Haymaker, secretary of the last-named association, gave the writer the following very interesting explanation of how, in his opinion, the building and loan associations can do more for rural credit than any of the foreign land-bank systems. Mr. Haymaker has become quite widely known as the sponsor and advocate of the building and loan association as a means of both agricultural and urban credit. He holds that the intermixture of rural and urban loans, and the frequent and periodic payments received from both sources furnish the steady circulation of money that helps the entire community, including loaning associations.

Mr. Haymaker's views follow:

The two principal sources of discussion going on at present come, first, from the practical farmers themselves, and individuals and organizations allied with farm affairs, who are aiming to improve farm conditions, and, second, from financiers, who are striving to direct the movement into some channel which will chiefly benefit their financial institutions. While there is considerable agitation among farmers, demanding the creation or adoption of some financial system that will improve rural conditions, there is much more persistent and effective agitation by financiers, urging a line of action on this subject that will give them control of the farmers' finances and enable them to levy toll thereon.

One feature of this agitation is the persistence with which financial interests are holding up the German land bank, as the ideal system which should be imitated in any type of institution which may be adopted in this country to handle the rural-credit situation. There are, however, some features of the way business is done by these German land banks which will place that system in a different light when they are clearly understood.

The German land bank is not a deposit institution, but is a loan bank only. A person cannot become a member of a land bank except he becomes a borrower. The only money it receives is the payments made by the borrowers to cover the interest and the instalments on his debt. The bank does not re-loan these funds, but deposits them with the commercial banks as a sinking fund with which to redeem its bonds or debentures.

A Bundle of Bonds Instead of Money

When a member wishes a loan, he gives his note and mortgage to the land bank. He does not receive money for it, but he gets a bundle of bonds, or debentures of small denominations aggregating a sum equal to his mortgage note. These bonds the borrower must peddle about or sell in the open market. He can seldom find an individual customer for his bonds, but the commercial banker is found always ready to take the entire lot off his hands, IF HE WILL MAKE THE DISCOUNT BIG ENOUGH.

In case a thrifty individual has scraped together his savings until he is able to buy a bond or two, he goes to the commercial bank and buys them, paying of course an advance over the price at which the borrower sold them. Thus it will be seen that the entire scheme is cunningly devised to

feed the commercial bank. The borrower is driven to the commercial bank to sell his bonds, and the investor is driven to the commercial bank when he wishes to buy. The banker is equally obliging to each; buying from the one and selling to the other, and LEVYING A PROFIT ON EACH TRANSACTION.

When the German land bank is viewed from this angle it is easy to understand why the American Bankers' Association is so enthusiastically in favor of having the system established in this country; but it is very hard to understand how such a scheme can be made to look attractive to any class of American investors or borrowers, especially in view of the fact that we already have in America a type of institution long established, thoroughly adapted to American conditions and ideals, and which is vastly superior to the German land bank from every point of view.

Compare this complex, expensive plan of operation with the manner in which our co-operative building associations do business. When a borrower gets a mortgage loan from a building association he hands in his note and mortgage, and receives in return the full face of his note in money. The transaction is brief, simple and complete; free from delay or red tape, and no middleman to intervene with a brokerage or commission charge.

When an investor wishes to invest his savings in the securities protected by these building association mortgages, he goes direct to the association, lays down his money and receives the certificates or other form of evidence of his investment. He buys them at par. There is no premium or commission to pay, but he exchanges his money for the securities, dollar for dollar, just as the borrower exchanges his mortgage for money, dollar for dollar.

The borrower pays six per cent. interest on his loan, and the investor receives five per cent. interest on his investment; the one per cent. margin between the two rates covers all the expense of conducting the business of the association and maintaining a reserve fund to protect both parties from loss. We assert that this ratio of expenses to volume of business is lower than can be found in any other business of like magnitude and similar character anywhere in the world. The borrowers and investors in the German land bank pay in the cost of operation and the commissions and brokerage charges a higher rate of expense than is paid for like services by patrons of building associations.

How to Reduce Interest Rates

We hear some complaint about the high rate of interest which is charged for farm loans in this country. Now the rate of interest is largely governed by the supply of money. A continued abundance of funds to loan will inevitably lower the rate of interest. Why should farmers be surprised at high rates for farm mortgage loans in any community, where the prevailing practice of the farmers themselves is to deposit their surplus cash in financial institutions which pay them little or nothing for its use and which are forbidden by law to make loans on mortgage security, and which are compelled by law to maintain a heavy cash reserve in some distant financial center, usually New York, where it is chiefly utilized by stock gamblers to manipulate the market. In many instances these capitalized institutions keep on hand in these distant reserve depositories a much larger cash balance than they are required to do, for the very purpose of making money scarce in the home community, lest its abundance might be a temptation to lower the rate of discount to borrowers.

Class Credit Would Cause Trouble

The suggestion to organize a financial institution or system for the sole use and benefit of the farming class, should not be encouraged. Any institution that is formed and operated solely for the farming class, or for any other class, will be a failure, and it ought to fail. Such class institutions may suit European conditions, where society is stratified, where class distinction and class separation have been long established and are well-nigh impassable; but there can be no permanent place for such an institution in America. Class laws and class institutions in this country are unwise and un-American, and in the end will be unpopular and unsuccessful.

From this American institution the city dweller may borrow money to buy or build or repair his home, and the farmer may borrow on the same terms money to buy more land or live stock or improve his farm or buildings.

In order to get opinions from different angles, Mr. James A. Devine, Ohio State Inspector of Building and Loan Associations, was asked to voice his views particularly in regard to farm loans secured through these institutions. His response follows:

In all but six of the eighty-eight counties of Ohio there are building and loan associa-

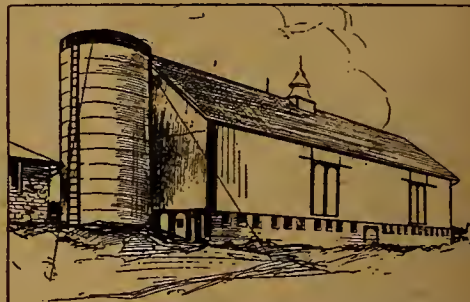
tions that are now lending money on farms, or that are willing to make such loans. From a survey made the past summer it was ascertained that there are now 5,605 loans made on farms by these institutions in Ohio, representing in money more than \$12,000,000. These loans are made at the rate of six per cent. and range in term of years from one to sixteen. The question of the time of payment is entirely at the option of the borrower, provided the security offered is ample to protect the amount of loan asked for. Quarterly or semi-annual payments are preferred by most farm borrowers, and in all cases the entire loan can be paid in full as soon as the borrower wishes to do so. The information that I have in regard to long-time loans is that the average farmer in Ohio does not desire a fifteen or twenty year mortgage contract in which to pay a loan. The usual preference is half those periods or less.

The building and loan associations in this country were first organized much on the same plan as the co-operative bank we hear so much about in European countries. It was and is now considered to be a co-operative association. Under Ohio laws an association may be organized by farmers in any community and operated entirely among and by themselves. These building and loan institutions have been in operation for forty years, have bought for their town and city members thousands of homes; and these members by their savings have paid for their homes and have acquired the habit of saving.

Investor Becomes a Stockholder

The farmer, if he has money to invest, instead of buying mining stock or other wildcat stock, can deposit his money in his local building and loan association and receive a guaranteed rate of interest upon his deposit—in most cases five per cent.—or he can become a stockholder and get any dividends which the profits produce. The farmer on one side of the road, by his depositing with the building and loan association, may be the means of furnishing the money to be loaned to his neighbor across the way without the necessity of being the principal to the transaction. It is impossible to calculate from the figures compiled in this office just how much of the money deposited in building and loan associations in Ohio represents the deposits of farmers, but I venture to say that they have deposited double the amount of the money borrowed by farmers.

In nearly all these associations lending money at a flat rate of six per cent. they pay to their depositors interest at the rate of five per cent. or to their stockholders a dividend of five per cent., thus leaving a margin of one per cent. to pay the operat-



C. H. Lachaw's modern dairy barn made possible by means of the building and loan farm credit

ing expense, to create a reserve fund required by the laws of Ohio and to protect against losses, and the residue is placed in an undivided profit fund, accumulated for the purpose of providing greater safety to depositors and stockholders, and which may at any time be distributed by declaring an extra dividend. Co-operative loan companies to be successful must provide the necessary margin to pay the expense of reasonable salaries, to justify the men who are at the head of these various associations being compensated for their time and labor in making them successful institutions.

Co-operation in this country, while the same principle as the one of co-operation in Germany, applies in a different way and to a different people when in practical operation. With the German his farm becomes an estate, and he is not ready to barter and trade like our American farmer, who is willing to sell at any time, when he can be shown a profit. To make the co-operative plan a success, such contingencies must be provided for in the management of the business, because many do barter and trade and cancel their membership and cease to be a part of the company, and in this way, unless an active management is in control at all times, it will result in hardship for the association.

The farmer of Ohio to-day who may be a borrower from one of these various building and loan associations becomes in many instances in a few years the stockholder and depositor in the same institution. I may be rather optimistic, but I cannot help thinking that in Ohio at least the building and loan associations offer the final solution of the problem of loans to the farmer.

Garden and Orchard

Everyone Can't Raise Peaches

By E. P. Stiles

SUCCESSFUL peach-growing depends upon the character of the grower and upon nothing else, because in him resides the qualities which make for success or for failure.

The first essential quality he must possess is good judgment.

It is folly to attempt peach-growing where peach-growing is impracticable. The grower must be able to judge accurately whether a location is favorable or unfavorable. To be able to do this, he must know with a degree of completeness, which is very unusual with men at large, just what the peach demands for its environment. This is a knowledge not at all easily gained, and a knowledge possessed by few. If he has not acquired it he must possess it before reliance can be placed upon his judgment in the selection of an orchard-site.

The knowledge of the demands of the peach must be tempered by another of nearly equal importance: a knowledge so undefinable that it may be called the commercial instinct.

A writer in *The Horticultural Gleaner*, in 1897, warned the peach-growers against planting so large a proportion of Elberta peaches. His warning was not heeded, but to-day it is recognized as having been sound. That is one example of "commercial instinct," but it is only one of very many phases of it.

The knowledge of the best methods of marketing, the best markets, and of what the markets demand in regard to qualities, are manifestations of this instinct.

There are locations splendidly adapted to successful peach culture which are rendered impracticable by the absence of marketing facilities. The commercial instinct leads away from such places.

The same sense manifests itself also in honest and skilful packing in attractive packages.

Another quality the successful peach-grower must possess is energy.

Energy Plus Commercial Instinct

Peaches in the early days of our history came very near taking care of themselves and making good crops at the same time. That was in the days when the peach was comparatively a stranger among the trees of America. The seeds had been brought across the ocean in the pockets or in the luggage of the immigrants; seeds from which the flesh had been eaten and, consequently, seeds free of disease, taken to a country free of peach diseases. When a seed happened to be planted in proper location the tree, rising from its slumber as of the grave, found itself in heaven. If it did not produce remarkable results the fault was with its propagator.

The most common weed cannot be put under extensive cultivation for a considerable period without developing a host of

York, where a noted horticultural authority tries to explain away the peach decline by attributing an extravagant optimism to the original settlers; in Texas, where the fact of lessening profits is generally admitted, and in Ohio, where two of its official authorities say: "The orchards do not show the earmarks of the painstaking labor and care . . . which one would naturally expect to see bestowed by a class of orchardists whose fruits, for a third of a century or more, have been a source of wealth."

There are exceedingly few peach-growers in the United States who realize the hopelessness of the struggle, if unaided, the peach is to-day making with its relentless foes. Personally, I know of but one man who has recognized one of the most insidious foes of the peach, and his work of investigation I have never seen mentioned in print in other than his own pamphlet. Because this foe is not recognized, and because it does not manifest itself in the young tree until the second or third year, it is being propagated in the nurseries and distributed broadcast over the country. Fortunately it is easily controlled.

The Peach Alone Can't Win

The successful peach-grower must have the energy to fight this battle for the peach. He has successfully begun it in New Jersey. Doctor Smith, of that State, under date of 1911, says: "Within the half-dozen years last past peach-growing in New Jersey has been reborn and is now increasing and flourishing on a firmer basis than ever." Later information shows that it is still advancing.

It is very doubtful if a man can make a success of peach-growing who does not love the work. This is a third qualification he should possess.

In addition he should be indomitable, patiently and systematically painstaking and a student of the whole subject, including every feature of the still unsolved marketing problem.

Fortunately the number of men who are qualified to be successful peach-growers is, as compared to the number of persons who are unqualified, ready and eager to consume it, very small indeed. In the past it has been with the successful peach-grower much as it has been with the successful preacher: Many have been called, but few have been chosen. In the future, test of qualification for success will be even more exacting, but those who are qualified will enjoy all the greater success.

Asparagus and Foreign Labor

By L. L. DeBra

AFEW years ago the delta lands of the lower Sacramento and San Joaquin Rivers were worthless swamps. To-day, by means of American capital and Asiatic labor, they are producing millions of dollars' worth of vegetables annually. Because this section is now one of the richest gardening spots, not only in California, but in the world, it has often been spoken of as the "Nile lands of California."

One of the most important crops of this section is asparagus. There are thousands of acres devoted to growing this vegetable. During the 1913 season just closed over



Working with asparagus on the "Nile lands of California"

enemies, insects and fungi, which will render its growth, in luxuriance, precarious. How much more must it be so with the tender, discriminating, exacting peach? Yet there is not a section in the United States, in which the peach originally did well, where it has not been subjected to the most absurdly negligent treatment; in which its enemies have not been allowed to multiply until it has been virtually overcome by them.

In 1850 a friend of mine planted a commercial peach-orchard in Maryland. Of this orchard it is said: "It produced twenty-one crops in twenty-four years."

Under date of 1901, the statement is made, in a bulletin of the Maryland Experiment Station, that: "There is almost a universal complaint among Maryland peach-growers that peach-growing is no longer profitable."

Similar statements may be quoted for other peach-growing States; from New

750,000 cans were put up in addition to the large quantity used fresh in the State or shipped east.

The asparagus is kept banked up to prevent "greening." But this year, however, green-tipped asparagus was found on California markets because growers learned that Easterners were not accustomed to the white asparagus and did not take to it readily.

The Japanese use a long, specially made knife to cut the "grass." The cutting is done in the forenoon, using great care in handling.

In the afternoon the asparagus is either canned or shipped to market.

Several of the largest canneries are owned by Chinese, and practically all the field work is done by Japanese and Chinese.

Surface bruises on fruit promote rot. To extend the keeping qualities of fruit handle it as you would handle eggs or dynamite.

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Poultry-Raising

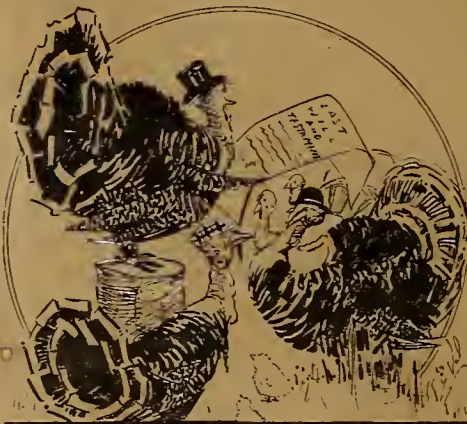
The Turkey's Will

By Jessie Ewing Stokes

IT WAS in the chill November. Near Thanksgiving, pray remember, And the turkeys wandered, sad, with pensive bill; For they missed the pompous gobbler, And were feeling mighty somber, As they slowly gathered round to hear his will.

"Hear ye all," the missive started, Written by the dear departed; "Take ye heed unto these words I have to say: When men bring choice bits to feed you, And begin to pet and praise you, Then the time has come for you to run away."

"In the neck you'll surely 'get it,' All too late you will regret it, If your vanity persuades you there to stay; You'll inevitably be bled, And be cut up when you're dead, And be situated as I am to-day."



"In the soup my journey's ended, And my joints asunder rended. For friends who came the day to celebrate; So be thankful it's no worse." Ran the will in accents terse. "But bear in mind it's rash to hesitate."

"While you're still alive and kicking, Rustle off to better picking. And profit by my melancholy wail; Else you, too, will soon be leaving, And your relatives be grieving, O'er the outcome of a sanguinary tale."

Breaking Into Poultry

By Fred Grundy

ONE of the queries that comes to me most frequently from would-be poultry-keepers is: "How can I best make a safe start in the poultry business?" Many living in villages and cities say they haven't a fowl or chick, but would like to keep just a few to provide eggs for their own tables. One says: "I take a big poultry magazine and have access to two more, and I asked this question of each, and they gave a list of necessities that footed up thirty-five to eighty dollars. Now I come for a bit of common sense and reasonableness."

The first advice I give every beginner is to let incubators alone. Stick to the hen. After you learn how to hatch and raise chicks with hens and you begin to feel that you understand the business, you can tackle an incubator and get your eye-teeth cut.

The orthodox advice of the poultry journals to the beginner is to purchase a trio or pen from some breeder for about twenty-five to fifty dollars and start "right." My advice is to buy two or three one-year-old hens and five or six good-sized pullets from some poultry-raiser near you. Have him pick you good birds from his flock. They will probably cost you a dollar each. Don't buy any male. You do not need one. He eats as much as a hen, makes more noise than a whole flock of hens and is of no use whatever.

To the beginner who is very short of cash I would advise the purchase of a hen and brood of chicks. The poultryman will want a dollar for the hen and about fifteen cents apiece for the chicks, and one can buy from ten to twenty chicks. Twenty is not too many, and the hen will care for them well in a coop made of a goods-box covered with a piece of prepared roofing. Ten feet of one-inch-mesh poultry-netting two feet wide fastened to stakes driven in the ground will make a good yard for them. When the hen begins to fly out of this pen cover it with a piece of two-inch-mesh poultry-netting and keep her in. Simply tie this netting cover to the side netting with hits of string, and tie the side netting to the stakes with string. It will last as long as needed.

I Want a Good-Sized House

A house for eight or ten hens can be made from a piano or organ box, but I prefer one that is large enough to shelter me while I attend to the birds.

I would make it about six feet wide, eight or ten long, and high enough to stand up in. It may be constructed of goods-boxes knocked apart, or of a cheap grade of lumber. I prefer the latter. Then it should be entirely covered with a good grade of prepared roofing. The roofing does not cost much, and it makes the roof rain-proof and the walls wind-proof. One can fit up the interior to suit himself, but small box nests and low perches are really about all that is needed. The run connected with the house may be four to eight feet wide and as long as desired. It should be about thirty inches high, entirely enclosed and covered with two-inch-mesh poultry-netting. Where one has free range the run is not needed, but in town it is a necessity. When the run or yard is covered with netting one does not need to clip the flights off one wing, as he must if the yard is open.

A Few Better Than Many

The variety of fowls the beginner should select should be one of the utility sort, any of the Plymouth Rocks, or Wyandottes, or Rhode Island Reds. In confinement these varieties lay as many eggs as the so-called egg breeds do on range, while they thrive much better because not so restless.

One thing the beginner in town or country must guard against is keeping too large a number. A few do much better than a large number. One lady living in a village not far from me has four Plymouth Rock hens that have laid nearly every day for weeks. They are very ordinary-looking birds and have no "secret" egg marks or signs about them, but they deliver the goods just the same.

Another lady I know, living in town, has a house and run like the one I have described and keeps six hens in it, and these six have laid almost continuously for the past year. They have averaged four eggs a day all that time, while many people keeping fifty to a hundred hens have not received enough eggs for their own use.

These two little flocks seem to be perfectly contented. They have the scraps from the table and a feeding-hox always supplied with a mixture of coarse cornmeal, bran and middlings or shorts. They have plenty of water and crushed oyster-shell all the time.

What One Man Does for His Poultry

A mechanic living in town has a flock of twelve hens in a house and run like the one described, except that his run is made in sections four by twelve feet which have a small door at each end. These sections are placed end to end ordinarily, but are switched about the lot so as to cover garden-plots that have had the principal part of the vegetables removed. These the hens scratch over thoroughly each season and eat all stray worms, bugs and green stuff that may be left in them. This man has all the eggs the family uses the year around from those twelve hens. And he also has one of the best little gardens in his town. His runs are easily moved about, and his hens thoroughly cultivate each vegetable-bed as soon as the vegetables are removed. This year he had two fine beds of radishes and lettuce too far away for his runs to reach. After the best of the vegetables were removed he called the hens into one of the runs as soon as he arose in the morning, and then dragged the run on the beds, and left it there until time to go to work, when he pulled it back to the other runs. This man buys six pullets each autumn from a farmer who has good birds, and uses the six two-year hens, which they replace, on his table. Last spring he bought fifteen eggs from this farmer, placed them under one of his hens and hatched fourteen chicks, which he has raised in a coop and one of his runs. They now weigh over three pounds each. He says he licks his chops every time he looks at them. Not one of these parties keep a male to annoy the neighbors with his useless crowing.

It costs very little to get into the poultry business on a small scale if one manages right. It costs very little to keep a small flock, and the saving in the cost of living is quite large.

Rat Trap That Works

By H. N. Gregory

FILL a hard-wood molasses barrel about one fourth full of cracked corn and set it in the rats' runway. They can easily climb up the wooden hoops on the outside of the barrel and get to the corn, but the inside of the barrel is so smooth that they can't get out again.

When you get ready to build a home build it on the farm that has furnished the money.

Gravity Dry-Mash Mixer

By Lee R. Keen

TO MIX feed with the dry-mash mixer here illustrated, all I have to do is to lay the feed to be mixed in thin layers on top of each other and scoop it into the mixer. By the time it reaches the bottom it is mixed. I have used this mixer with a great deal of satisfaction.



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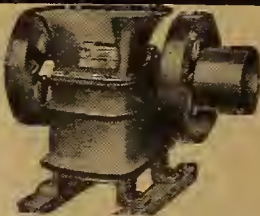
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Live Stock and Dairy

Goats' Milk and Malta Fever

OUR correspondence in past years shows that there is a very keen interest among our readers in goats as dairy animals. Goats' milk is recommended for infants and invalids, and there is a belief quite generally held that the city family with a good back lot might keep a milch goat and save the milkman's bills.

Of course the goat must have food on which to make milk, just the same as any other animal; but that it can make milk—and good milk too—on rougher and different rations from that required by a cow is perfectly true. Not every family likes goats' milk, but that is probably a matter of usage. Those used to it in many cases prefer it to any other milk.

The goat can be kept in a piano-box up against the side of the fence in the back yard too, and only gives about what the family needs in quantity. It is a sort of pocket cow; and while it can't be put on the breakfast-table on a tray and milked into the coffee-cups and the baby's bottle, thus insuring a fresh product, it is a really compact, handy little dairy proposition for those who like it.

Goat fanciers are shocked, therefore, to learn through the news service of the United States Department of Agriculture that it isn't always safe to use goats' milk. In New Mexico and Texas where goat dairies are more common perhaps than elsewhere in this country a very serious disease, called Malta fever, mountain fever, slow typhoid and other names, has been traced to goats whose milk is used. It always makes its appearance among people associated with goats. The disease is sometimes a good deal like malaria, and lasts from six weeks to a year. About three cases out of a hundred terminate in death.

Over the border, in Mexico, the people engaged in goat-rearing are not so apt to have the disease. The reason for this lies in the fact that the Mexicans always boil the milk before consuming it. This seems to prove that the milk is, usually at least, the means of infection.

Pasteurization offers a means of warding off the infection—which comes from the fact that the goats themselves have the disease, but in so mild a form that the attention of the people is not called to it.

Possibly it is a disease of the warmer climates. In fact, the history of it seems to indicate that it is. But the fact that it exists is to be remembered. It cannot be said that one should avoid goats' milk, or even that ordinarily this milk is not just as wholesome as that of cows—perhaps it is generally even more so; but this disease is something to watch. In this it resembles tuberculosis, typhoid and other possible infections in ordinary milk.

Treatment for Curb

By Dr. A. S. Alexander

I AM asked to prescribe a treatment for two three-year-old Percheron colts, each of which has a curb on one leg. The animals weigh 1,550 pounds each and have been worked. One of the curbs is one fourth of an inch high; the other is larger.

If the colts were born with crooked, "sickle" hocks, commonly termed "curly formed hocks," treatment of the small curbs will not be likely to do much good; but if the hocks are of good conformation and the curbs are due to strain or sprain, recovery will be probable if the following treatment is given:

Confine the colts to box stalls, and feed lightly on laxative feed. Several times daily rub downward firmly for a few minutes on each curb, using a tooth-brush handle or smooth bit of hard wood for the purpose. At night swab the parts with a mixture of one part each of tincture of iodine and turpentine and two parts of alcohol, but do not rub it in. Persist in the treatment for months, if found necessary.

If lameness comes on, or is present, from the worst of the curbs, clip off the hair, and blister that curb two or three times, at intervals of two or three weeks, using for the purpose a mixture of one dram of biniodide of mercury and two ounces of cerate of cantharides. Rub in a little of the blister for fifteen minutes, then tie the colt up short in an ordinary stall so that he will be unable to lie down or bite the part. Wash the blister off in three days, and then apply a little lard daily.

Feed for the Big Drafter

By David Buffum

THE best feeds for the draft-horse used for coal-teaming and similar heavy work are corn-meal, bran, molasses and oats. Mix corn-meal and bran, half and half, and stir into it the molasses. This mixture may be fed night and morning, giving oats alone at noon. The quantity must be determined by the amount of work the horse is doing; what is needed being simply enough to keep

him in good order. Begin by giving, each night and morning, one quart of corn-meal, one quart of bran and one quart of molasses. Then feed four quarts of oats at noon. If this does not seem to be enough increase the oats. It is impossible for me to be more explicit without knowing how hard the horse to be considered has to work. In addition to the grain he should have about fifteen pounds of hay every night, and a handful, say four or five pounds, in the morning. Feed no hay at all at noon.

Give him a good bed at night in a stable well ventilated, but free from drafts. Keep his feet clean with a pick and sponge. Be sure to give him all the water he wants to drink at least three times a day; no horse, however well fed, will keep in good order without regular watering.

The amount of hay that I have recommended is on the assumption that the animal is a large draft-horse. If he is not of this type a somewhat smaller quantity, say from twelve to fifteen pounds daily, will be enough.

Castor-Oil for Warts

By A. S. Alexander

WARTS on the npper of a cow are readily removed by rubbing in best castor-oil or fresh goose-grease once or twice daily. Any wart that has a small neck may be removed at once by the use of the scissors; then lightly apply lunar caustic pencil.

Always water the horse after he has eaten his hay at night. Do not go to bed leaving him thirsty all night.

A Three-Horse Evener

By W. L. Holwick

THE lightest and most compact three-horse evener for plow, harrow, tongueless disk harrow or for any purpose where a tongue or pole is not used is made as follows:



Take a piece of flat iron five-eighths inch thick, one and one-half inches wide and eleven inches long; punch or drill a hole (C) an inch from one end, and put in a plow ring about seven-sixteenths inch thick and about three inches in diameter. Three inches from center of this hole make another hole (B), and put in an oblong link or ring.

Six inches from the center of this hole (which will be one inch from the other end) make another hole (A), and put in a long link with a half twist. This makes the evener.

Take a two-by-four scantling five feet four inches long, and fasten a clevis in hole in each end and middle.

Hitch the plow to the ring in the middle of the evener. Hitch the doubletree, which you have made, to the ring in the short end of the evener.

Put a singletree on each end of doubletree and one to the link at the long end of the evener.

Your evener will now stand upright, the middle horse pulling on the long end of evener at the bottom, and the two outside horses pulling one at each end of the doubletree, which is hitched to the ring at the upper, or short, end of the evener.

If you have no forge and anvil to punch holes or no drill or cannot weld rings, you can have your blacksmith make the whole device.

It cost me fifty cents to have one made. Or, if you can make the holes and cannot weld, three open links will answer the purpose by hammering the openings together.

I have found this arrangement ideal for breaking colts to work. Hitch the colt in the middle at first. If he insists on going too fast he will pull the entire load. If he pulls reasonably even he will pull only his third, and if after he works a few hours and becomes fagged out or overheated, instead of stopping the work and going to the barn, he can loaf and the other two horses to doubletree will draw the load, allowing him to walk along.

I break a two-year-old colt each year without any injurious effects. After he is broken to work steadily he can be hitched to the off side by using two jockey-sticks, one from the lead to the middle horse and one from the middle to the off side horse or colt. I find it best to use two jockey-sticks in either case for ease in turning at corners.

I have already worn out two of these eveners and find them indispensable these days with the high cost of help.

One must use heavy and fast-working implements that require at least three horses in order to economize time and labor.

EDITOR'S NOTE—Few practical horsemen would be willing to put a green colt which they value in the position described. If ambitions the colt will do more than he should and quite likely get sore shoulders, become discouraged and form a loafing or balking habit. It is far better to put him on an equalizer.

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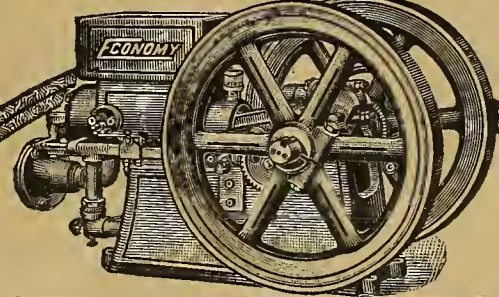
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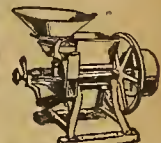
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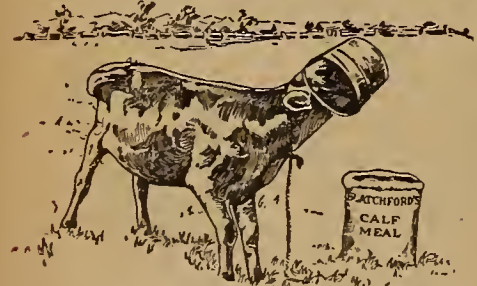
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Ready for the Block

By Egbert P. Lincoln

THESE lambs belong to Marshall T. Lincoln of the famous lake region of central-western New York.

Mr. Lincoln's specialty is Durham cattle, but he also carries on a great deal of general farm work. Sheep-raising fits in nicely with this, inasmuch as the greatest care with sheep comes in winter when general farm work is slack. During the summer's rush of work they are turned to pasture and then require very little attention.

The flock of breeding ewes averages between sixty and seventy grade Rambouillets. These ewes are crossed with a mutton ram. Lambs begin to come about May 1st.

During the lambing season the members of the flock are carefully supervised. They are visited early in the morning, the last thing at night, and also once during the night. This very careful attention insures minimum loss. Between seventy-five and ninety lambs are raised in an average season.

When the lambs become quite strong the entire flock is turned to pasture. They are salted and looked after once or twice a week, are occasionally moved to new pastures, and about September 1st are weaned. No grain of any sort is given them, but they are kept in good fresh pasture.

The lambs are sometimes sold in the fall and sometimes in the spring, the aim being to have May lambs, to keep them over winter, to shear them March 1st, and to sell in April. The lambs will weigh about one hundred pounds each, and will sell for six cents per pound.

During the winter the ewes are fed all the alfalfa-hay and silage they care for. Beans are raised on the farm and the pods fed to the sheep. Frequently a small field of cabbages is raised for the express purpose of feeding to the sheep at the season



Lambs can be made an important money crop on many farms

when change must be made from green fodder to hay. Grain—oats and corn—is usually fed the ewes during the winter. The lambs wintered over are fed from one-third to one-half pound once a day.

Fifteen of the best ewe lambs are saved to keep the ewe flock good. The ewes clip about eight and one-half pounds of wool, and the lambs seven pounds.

Keeping Horses' Feet in Shape

By David Buffum

AN OHIO subscriber asks advice about his four-year-old mare, whose hind feet have become one-sided through the uneven wearing of the hoof, so that the inside is much lower than the outside.

This condition can generally be remedied, either wholly or in part; but let me first speak of that prevention which is always better than cure.

The feet of the colt should receive attention from his infancy till he is old enough to be shod. There is a very prevalent idea that in the unshod colt "nature will attend to this," but the idea is wrong. The very essence of good husbandry lies in taking advantage of the forces of nature, not in leaving them to themselves; and the growing animal needs attention in the same way that the growing tree needs pruning.

From various causes, often through some little muscular weakness or the more rapid development of some muscles than others, the growing colt wears one side of his foot more than the other. Thus the foot becomes one-sided; and when the hardening muscles have become mature they have adapted themselves to this abnormal condition. I have frequently seen colts with the outside of one hind foot and the inside of the other much lower than the opposite sides, a condition which could have been easily prevented by paring and filing the feet from time to time so as to keep them in their natural shape. Very recently my attention was called to a beautiful three-year-old filly that had never been shod, whose fore feet had become so contracted that she traveled "sore" and had to be sold for a mere trifle compared to what she would otherwise have brought. Had the soles of her feet been pared from time to time, so as to always give the frog its

proper share in supporting her weight, this miserable condition would have been prevented.

When one-sided feet are found in the fully matured horse the remedy is the same—careful trimming to their proper form. But, as the condition has become, so to speak, chronic, the whole foot, inside as well as out, has become distorted; nor have we, as in the young colt, the aid of the growth of the foot, which needs only guidance to keep it in the right direction. Therefore the cure must be much more gradual. Often, indeed generally, the foot cannot be trimmed at once to its proper form; it can only be trimmed with that end in view, and frequently months are needed to accomplish the purpose. But, if the work is faithfully done every time the horse is shod, improvement, if not a complete cure, is sure to follow.

Keep the Feet a Natural Shape

It frequently happens that, even when the proper form of the foot is preserved, the horse wears off one side much more rapidly than the other. In such a case it is rarely wise to insist upon the exactly symmetrical foot, but to favor the tendency a little and prevent its increase by a shoe designed to stand the extra wear. One of the best horses I ever knew was always shod with the outside of his hind feet a little lower than the inside, and with shoes reinforced on the outside with steel. And with horses that interfere, even if their feet are perfectly normal, it is often necessary to keep the outside the lowest, either by paring or by an extra piece of iron on the inside of the shoe.

I think I should say a word about one matter upon which there is much misunderstanding—the use of "tips" to obtain frog pressure. Theoretically, they are good, but, the way most smiths put them on, they elevate the toe, often causing the horse to



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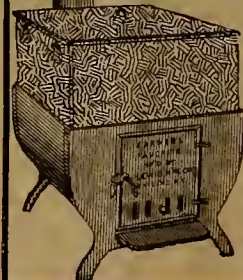
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The FARMERS' LOBBY.

THERE'S nothing like going away from home to learn the news of what's happening at home. The other day I ran across some facts about the American meat business in a London newspaper. After digesting them I went down to the Department of Agriculture to talk to Dr. A. D. Melvin, head of the Animal Industry Bureau, who had just come home from a trip to Argentina and Uruguay to study the live-stock business there. Between the two I learned some things that I believe every reader will be interested in. I assume that everybody knows that the number of meat cattle in the United States is getting smaller, while the population is getting larger. The best government figures indicate that there are now about 36,030,000 meat cattle in the country; which is over a million less than a year ago, over two million less than two years ago, three and a half million less than three years ago, and almost six million less than the census found in April, 1910.

A natural corollary to this is the steady dropping of American exports of cattle and meats. By 1914, in all probability, we will import more beef than we will export, for both Argentina and Australia will by that time be getting into a real stride of business with us.

Argentina has now about 29,000,000 cattle, most of them meat animals. Their number has been increasing very fast during the same years when ours have been decreasing. Doctor Melvin comes home with the comforting assurance from one Argentine authority that that country is capable of getting its total up to 200,000,000, and is now on its way to that figure. Doctor Melvin didn't believe any such number would ever be reached, because to reach it would involve sacrificing the grain-growing business of the country, which is very profitable. But he was convinced that Argentina is going to increase its cattle production for a long time to come. It will pass the United States in a very few years, according to past performance and present outlook.

Their Cattle are of Good Quality

MOREOVER, they have much better cattle in Argentina than most Americans realize. Doctor Melvin was surprised at the quality of their stuff, among which he found the Durhams and Polled Angus predominating. The Argentine government, the meat buyers, packers and exporters and the live-stock associations have devoted great energy to improving the cattle. Moreover, the ownership of cattle is to a great extent concentrated in a few persons who control great tracts of lands; and these very generally are both intelligent enough to understand the desirability of improvement, and financially able to effect it. They have not got up to American averages yet, but they are coming.

Now we will drop the comparative live-stock supplies and prospects of the two countries and turn our attention for a moment to another aspect of the question.

Thirty-five years ago the first efforts were made to develop in Europe a trade in Argentine meat. At that time Argentina was more a sheep than a cattle country, and wool was the most valuable product of the sheep. The idea of selling mutton in England opened the first field of experimentation. Local and then some British concerns tried it with varying success for a time, but at length the business was put pretty well on its feet. For more than twenty years the meat exports of the country were practically all mutton. Three companies, all killing and freezing meat to ship it to Europe, grew up in this era. They were the Sansinena Frozen Meat Company, the River Plate Fresh Meat Company and the Las Palmas Produce Company.

Then, about fifteen years ago, these companies branched out into beef. Here again their experience was more valuable for a time than their profits. At that time the United States was still a great exporter of beef, and our packers pretty thoroughly controlled the markets in Europe. Their storage and refrigeration plants, contracts with big consumers, knowledge of the market's requirements and other facilities enabled them to make a hard fight against the intrusion of the Argentines.

Meanwhile, however, it had become apparent that the American surplus for export was not going to be sustained. Consumption was growing faster than sup-

Argentine Beef in American Control

By Judson C. Welliver

Will the American packer bring his own Argentine meat here to compete against his own American meat and break prices here?

plies. The packers, with a magnificent machine for doing business abroad, saw ahead the time when they would have no meat to put through that machine. They looked about for a new source of supplies. They could not get control of the great ranges in the United States; they could not buy up the farms; they must go elsewhere. They looked into Argentina.

American Packers Make Argentine Investments

THEY did not care to pioneer; the Argentine companies did that for them. They found that these concerns were getting the business established. They had proved the practicability of shipping refrigerated meats across the equator to Europe. New companies, moreover, had come into the business, some Argentine and some British capital backing them. The American invaders deemed it best to buy into established concerns, and Swift & Co. made the first plunge by getting control of the La Plata Cold Storage Corporation. Not long afterward the National Packing Company bought control of the LaBlanca Company. Readers need not be reminded that the National Packing Company was the big concern jointly controlled by the group of great American meat concerns, pointed out by the Government, in its prosecutions of the packers, as the real nucleus of the "meat trust," and finally dissolved. When the National Packing Company was dissolved the Armour and Morris interests took over the LaBlanca Company, while Swift & Co. released their interest in it and retained the La Plata Company.

The business judgment and foresight of the big packers were completely vindicated by ensuing events. The supplies of beef raised in the United States became increasingly inadequate to meet the home demands plus those of the European market; and as this condition developed the packers substituted Argentine for American beef with their European trade. The disappearance of American meat finally became practically complete. The big American concerns and the Anglo-Argentine companies were in competition for domination of the Argentine-European business.

Here we come to a development thoroughly characteristic of American methods in big business. In 1911 the American concerns flooded the British market with Argentine beef. They paid good prices for the stock, and made themselves solid with the Argentine producers. At the same time they poured great quantities into England, breaking the market there. In two years they increased their business over one hundred and fifty per cent. In that same period the Anglo-Argentine companies, competing against them, increased their business only about fifty-five per cent. Plainly, the Americans were going after the business in strictly American fashion.

No Bothersome Anti-Trust Laws Down There

IT DIDN'T take the Anglo-Argentine concerns long to discover they had met strong competition. They finally sued for quarter, and an arrangement was made that our anti-trust law would not perhaps approve, but that "went" in Argentina. The business between Argentina and Europe was distributed among the different companies, in the proportions that their shipments in the preceding year had borne to the whole business.

The Argentine concerns didn't like this. They would have greatly preferred to make the distribution on the basis of "normal" proportions of business—that is, the distribution in the period before the big bulge in American shipments—but of course the terms were finally made as dictated.

Something like two thirds of the whole business was assigned, in this truce, to the American concerns. This dicker and distribution went into effect with

the beginning of 1912, and immediately it had been arranged, the American concerns set about to increase their capacities.

While the work of enlarging plants was going on the truce was maintained; but when the new plants were ready for business, early in the present year, the Armour-Morris LaBlanca Company applied to the managers under the syndicating arrangement for an increase of their allotment. The increase was opposed, naturally enough, by the Anglo-Argentine companies, and the Americans took steps to dissolve the arrangement.

Once more the war was on, and a merry war it has been all this year. The American houses proceeded once more to hoist their shipments. In a given month, under the percentages of the syndicating arrangement, the La Plata or Swift Company would have been entitled to ship 61,000 quarters per month; but with that arrangement dissolved it actually did ship 112,000 quarters in April, 139,000 in May, and 135,000 in June. LaBlanca, the Armour-Morris Company, was assigned about 30,000 quarters per month under the syndicate plan; with that plan ended, it did ship, in April, 47,000, in May 73,000, and in June 72,000 quarters. This would have ruined the British market if the other concerns had not recognized the inevitable and curtailed their business. They had come to the conclusion that the American concerns were perfectly willing to do business at a loss if need be; the Anglo-Argentines couldn't see any fun in it. So they decreased their business and have been letting the Americans take over the trade.

There the war stands at present. The Americans have made it part of their policy to pay good prices to the Argentine producers of live stock, and these feel pretty certain, down to the present, that they have no fault to find with the liberal Northerners. The British market has gone to pieces a good deal under the weight of the unwonted large supplies; so the British consumers likewise feel cheerful about their situation. The plan of underselling in the selling market and overbidding in the buying market, in order to drive a competitor out of business, is perhaps not so well known to the English eaters and the Argentine raisers of meat as it is to the American consumers, say, of petroleum products.

Look Out for Australia, Too

AT THIS point of the South American warfare enters a factor that makes this struggle of concern to the American raiser and user of meat. Congress has taken the tariff off meats. Already Argentine meats are coming into our cities in a volume that, while comparatively unimportant as compared to our needs and our production, yet suggests the greater things that may happen later. What will be the effect on American production, on American prices, on the distribution of world business? Will the American packer bring his own Argentine meat here to compete against his own American meat and break down prices here? It is hardly reasonable to expect that Swift & Co. of Buenos Aires will become very keen competitors of Swift & Co. of Chicago, Kansas City, Omaha, South Saint Paul and the rest of the Swift towns. Likewise, Armour and Morris of Buenos Aires are hardly to be expected to cut the throats of their American houses in the American market. Will Argentine meat be used to break down primary prices of stock in this country, and thus enable the packers to take greater profits? That is one conjecture. At present the Argentine supply is hardly large enough to make a very serious dent here, after taking care of the European trade. But suppose the Argentine stock business increases as fast as optimistic Argentines expect it will. Suppose Australia comes into the game. Swift & Co., Doctor Melvin tells me, are building a big plant in Australia. Are they going to appear on our western coast with Australian meat to balance off the Argentine meat on the eastern coast? If so, what are the possibilities in that direction?

There are other fields which the Americans are invading too. Uruguay is one of the great cattle countries of South America; and Doctor Melvin tells me that, despite some efforts to keep them out, the Americans are getting in there.

These aspects of the matter, and some others that will hardly fail to be of interest, will be reserved for another letter to the Lobby.



The Burden of Yesterday

By Adelaide Stedman

Illustrated by R. Emmett Owen



Synopsis of Preceding Chapters

A group of young people are entertained for several weeks at Mr. Cumnock's house. Mr. Cumnock is a Texan cow-puncher who has become rich, and his daughter, Ernestine, he has educated at a fashionable school. She has become intimate there with a very young teacher, Faith Hamilton, who is persuaded to become a guest of the house-party by Mr. Cumnock, who secretly employs her at a salary, to polish his mind during her stay. These lessons become periods of flirtation, and finally Mr. Cumnock asks her to marry him. This is a great shock to Faith, as she is already in love with a guest, William Drake, who has shown himself increasingly indifferent to her as her flirtation with Mr. Cumnock has progressed. Mr. Cumnock's daughter, Ernestine, is interested in a boys' reformatory camp near by, which is run by Mr. Drake's secretary, Robert Lewis. This boy is himself a product of the Children's Court, and he thinks, erroneously, that Ernestine knows his history and ignores it; consequently he feels free to win her love.

Chapter VIII.

AT SIGHT of her dishevelment Mr. Drake sprang ashore.

"Why, Miss Hamilton, are you hurt?"
"Oh, no—no, thank you," Faith stammered weakly, adding instantly, "Why do you ask that?"

"Your hair—your dress!"
"Why I—I just got caught by some heavy branches!" She laughed a little too loud and too long to be convincing.

"Won't you sit down?" Drake nodded toward the motor-boat with formal politeness.

He did not desire her companionship. Slowly, unwillingly, every instinct protesting, he had been forced to the conclusion that she had deliberately planned to marry Mr. Cumnock for the material comforts he could give her.

"No, thank you," Faith declined undecidedly. It was growing dark. She must get home somehow.

While she stood hesitating, Mr. Cumnock burst out of the woods, at right angles from them, and plodded heavily toward camp without looking in their direction.

Drake saw Faith tremble and her face turn crimson. Her disturbance and Mr. Cumnock's began to enlighten him. Had he wronged Faith after all? Was he nothing but a jealous, suspicious fool?

"Miss Hamilton," he begged, in the gentle voice she had not heard during those fatal two weeks, "you must have had a long walk and be very tired. Won't you let me take you home in the motor-boat? It's quite a way into camp."

Faith allowed herself to be assisted into the little craft and propped up with cushions.

The engine started, and they sped away across the sunset water.

There was a long, embarrassed silence. Then Mr. Drake said, merely in order to say something, "Well, this is the last day here. My vacation is over."

"So is mine," said Faith.

"Yours?"

"Yes." Faith wondered when she had made the decision. "I have lost my position. I—must look for something else."

He expressed his sympathy, then went on, urged by a compelling curiosity about his host's wooing.

"But why rush away? You have the whole summer."

"I must go," she insisted. "I've already known for two weeks!"

"And you didn't tell us?"

"I hated to distress—Ernestine." Faith's mouth quivered like the mouth of a child. The grave, questioning look in his eyes cost her her self-control.

"Don't look at me like that! I'm miserable enough! I know what you must think of my—my mad actions! But I've been so wretched!"

She began to cry hysterically. "I was having such a good time when the news came! I knew I mightn't have another—ever. I wanted to dance until I'd drop—I wanted to sing until my throat was hoarse. I wanted to be silly and giddy and irresponsible once! Unburdened! Can't you understand?"

A craving to be unburdened! How well Drake could understand that! Words warm with human sympathy he poured out for her comfort.

They had gone slowly. Already dusk lay gray on the river. It was very still. Occasionally a boat chugged past, followed by a gentle succession of ripples. Nothing else disturbed the evening quiet.

"You ought to be a minister, Mr. Drake," Faith said at last, smiling a little for the first time. "You are so comforting. I don't feel quite like the blackest black sheep any more!"

Drake laughed a low, genial laugh that was as tender as a caress. The Cumnock car came roaring along the river-bank, and a chorus of laughing calls came ostentatiously floating toward them. Faith heard Mr. Cumnock laughing at something. Her peace deepened. She knew that genuine love could not be so lacking in dignity.

Mr. Drake watched her face with a sort of reverent joy. The great miracle had taken place in his heart. He lived no longer for himself, but for her. Fate had been good to him. It had lifted his home obligations in time for him to assume hers.

He longed to take her in his arms and make her love him.

Instead, he compromised by saying, "You know I, too, am going to be alone in New York this summer. We'll have to keep each other from getting lonesome!"

The boat bumped against the Cumnock landing.

"Who—oo," came a hail in Ernestine's voice. "Oh, there you are! I came to see if you were in sight. May I kindly suggest dinner?" Match-making little Ernestine! If she could have guessed what she had interrupted,

Faith and Drake sprang self-consciously from the boat. Assisting her up the steps, his arm pressed hers with promissory tenderness, and she did not draw away.

When Drake came down from making his dinner toilet he noticed on the hall table a letter addressed to him in Laura's handwriting. He took it up, puzzled. What did Laura want? She never wrote to him. As he stared meditatively at the envelope he saw Faith move toward the dining-room with a shy little nod for him. He followed her, stuffing the letter in his pocket, seized by a queer, uneasy dread of its contents. It could wait.

Chapter IX.

FAITH slipped away directly after dinner. So Drake, finding himself alone on the veranda, gave himself up to happy planning.

He trembled with the force of his feelings. What magic had God put into his heart that this slender, fair-haired girl had but to look at him, to smile, to beckon, and he would come, feeling that wherever she was was home?

He suddenly recalled Laura's letter in his pocket. He had left home satisfied with affairs there. The day for his sister-in-law's departure had been set, and Jobyna Price had paid them a special visit and arranged all details. What could Laura want, especially as she knew he would be at home to-morrow. He tore open the envelope, took out the scented sheet of note paper and read:

MY DEAREST WILL:

This is the hardest letter I have ever had to write, and you will realize how strong my motive is, when it makes me risk the possibility of your thinking me ungrateful and unappreciative of all you've done for us.

Oh, Will, ever since Jobyna Price's letter came I have been so miserable, and I couldn't bear to let you know it. It is such a wonderful opportunity. I see your point of view, but you never have even suspected mine. What it must mean to a mother to be taken away from one child to give the other a future.

Of course it is my duty, in my dependent position, to make this sacrifice, and I will.

But, Will, I could not face you to-morrow and keep up the farce of happiness. You would see through me, and I haven't quite the courage to say this to you. I have thought and thought of something I could do—but I am so helpless—a burden to you. So I will go. Please don't speak of this or let your mother know. I need every ounce of my courage. Perhaps on the day we leave you will take little Florence away and so help.

Your loving and appreciative,

LAURA.

Drake's feelings were indescribable as he read that letter. Were the old prison walls of responsibility closing down on him again? Laura didn't want to go! He couldn't disregard her plea for he had promised Herbert to care for her.

He could not maintain two establishments, yet Faith needed him.

On the veranda above his head another love drama was progressing. Ernestine, very shy, very palpitant, had perched herself on her father's knee.

"Dad," she began, "I've the most exciting secret to tell you."

"Eh?" Mr. Cumnock growled. He was in an atrocious humor, but had so far been pride-driven to hide it.

"Daddy dearest," his daughter whispered, her face close to his, "I'm in love."

"What!" Mr. Cumnock sat up with an angry jerk.

Love was a sore subject with him that night. "I'll send that young whipper-snapper Hazelton right about face darned quick."

"But it isn't Kirk," Ernestine cried.

"Not Kirk! Who the dickens is it then?"

"It's Robert Lewis."

"Lewis!"

"Oh, dad, he's perfectly splendid!"

"And I let you go over to that camp to keep you out of mischief."

Mr. Cumnock released himself and began to pace the veranda.

"Puppy love!" he scoffed.

He stopped his rapid pacing, his feelings relieved by action. Ernestine was leaning against the balcony railing, staring out over the moonlit garden. Her alert, decided little face was unusually soft, her crimson lips slightly puckered as if in memory of that first wonderful kiss. Mr. Cumnock rested his great hand on her hair.

"Erny," he said gruffly, "let your old daddy be man enough for you for a while. Stay a little girl as long long as you can. This love ain't always what it's cracked up to be. There's lots more fake than genuine in circulation."

Ernestine turned with one of her characteristic quick gestures.

"Dearest," she coaxed prettily, disregarding his words, "you've got to ask Robert to call when we get to town."

"What do you know about him anyway? Who is he? Where's his family? Where'd he come from?"

"What's the difference?" his daughter questioned.

Mr. Cumnock gave her one look of exasperation.

"Go to bed," he ordered, "before I lose my temper."

Ernestine rushed to him once more and threw her arms about his neck. Her warm, sweet, pleading face was very beautiful.

"You duck of a dad," she whispered, "you always give me my own way."

"Go to bed!" he ordered again. Then, as the pressure about his neck continued, the inevitable relenting came. "I'll talk about this boy of yours with Mr. Drake."

Ernestine felt she had won. Mr. Drake would have nothing but good to say about Robert.

"He'll be sympathetic!" she exulted, placing a final triumphant kiss in the exact center of her father's forehead, "because—I'll tell you another little plan of mine, one you will approve of, to pay you for being good. I'm trying my best to make Mr. Drake and my own Faith Hamilton fall in love with each other."

This was Mr. Cumnock's night of shocks. He stood quite still, breathing heavily.

"Won't it be ideal," Ernestine rushed on. "They're just suited to each other. And think what a splendid thing it would be for Faith and Berenice!"

Mr. Cumnock seemed to have lost the power of speech. He stared at his daughter. "I've tried so hard to bring them together," she went on confidentially, "but I haven't seen one single encouraging thing, until to-day Mr. Drake brought Faith home alone in the motor-boat. Do you know how that happened?"

"No!" he answered stiffly.

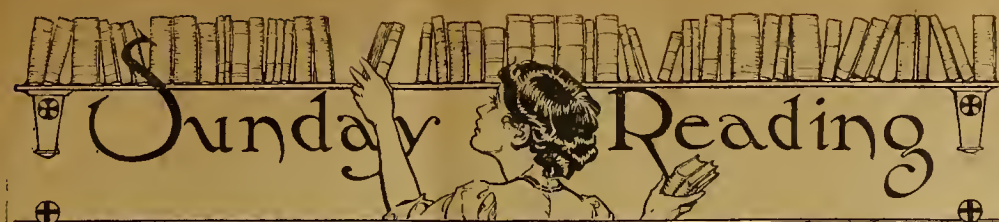
"The worst of it is that now, just when things are getting interesting, Mr. Drake's going home. Daddy dear, won't you help me manage this affair? You persuaded Faith to come here, and you can always fix things. Won't you think up a plan to bring them together again?"

Mr. Cumnock laughed, though without mirth, at the sheer irony of the situation.

"All right, Erny," he said wearily, to end the discussion. "Now, go to bed!" [CONTINUED IN NEXT ISSUE]



He lived no longer for himself, but for her



The Young Man, Joshua

Sunday-school lesson for November 23d:
Joshua, the new leader. Joshua 1, 1-9.
Golden Text: Be strong and of good courage.

FROM the beginning Joshua seems to have been Moses' right hand. He comes upon the scene in the first battle, that encounter with the Amalekites before the Israelites even reached Mount Sinai, and he was as fearless then with an untried mob of slaves for soldiers as when, forty years later, he led his army against Ai. Again he pressed forward in youthful, ignorant, loving zeal, eager for the honor of his master, urging Moses to stop the mouths of all other prophets. Joshua was one of the handful who tried to calm the cowardly people who were terrified by the report of the spies. Such was he in his youth, and when in middle life the leadership fell on him we find the same strong man, with unwavering faith in the Hebrew's God and in the Hebrew destiny.

The Family and the Herds Were the Army

The fitting of the leader to his time is one of the curious facts to be traced in all history. The nation had had its years of a patient training. It needed no longer a teacher, but a warrior. A little like Horatio, the bosom friend of Hamlet, is this intrepid Joshua, who was no prophet, but essentially the man of action. He was a general born, but his army was an entire people, with its flocks and herds, the women and children, and with all the goods that even primitive home life requires. It was no body of soldiers free to make raids or long sieges, as might seem wise. Wherever the fighters went, whatever they did, the families and the possessions must be guarded and the multitude fed. If the sight of such an advancing host struck terror into hearts within the walled cities of Canaan it was none the less a problem before which any general might stand aghast.

His Lamp Lighted and His Loins Girded

But Joshua had not dwelt forty years at Moses' side without learning courage. He had learned his lesson as those only learn who revere their chief and serve with enthusiastic devotion. It is a beautiful friendship, that of the lawgiver and "his young man, Joshua." So well understood was Joshua's position, and so well known his ability, that there was no question as to his succession. Neither the warrior priest, Phineas, nor any son of Moses, nor any favorite of any tribe arises as rival in that quiet month amid the flowers and birds of Moab, when Israel mourned for Moses. "Be strong and of good courage" is the splendid command to the new leader. The words have rung down the centuries and been the watchword of noble souls. Dauntlessly Joshua took up his dangerous duty, and undoubtedly his people followed on.

The Jewish Rubicon

Sunday-school lesson for November 30th:
Crossing the Jordan. Joshua 3, 7-17.
Golden Text: Fear not, for I am with thee.

THE bed of the Jordan is cut in a deep and narrow valley. Three terraces hem in the stream flowing a thousand feet below the hills of Palestine. It is more than a boundary, it is a cleavage, definitely separating, in a way that no river of low banks and wide watered valley could, the narrow land of Canaan from the fertile plains that lie between it and the desert stretches of Eastern Asia. The story of the miraculous passage of the river has so fastened the attention that one forgets what this passage really meant to the nation. They had rested on the hither side of the river for many weeks.

The place is described as a wide, rich plain, carpeted with wild flowers, watered by many rivulets, here and there covered by acacia-trees, where birds of brightest plumage carol; and beyond to the south, by banks of streams, scented oleanders rise to a height of twenty-five feet, their flower-laden boughs bending like those of the willow. It was the opening of a wonderful grazing country, and was certainly more lovely than the Palestine seen by travelers of to-day. Moreover it was already conquered, and it spread before them, inviting to the easy pastoral life, to which they were now wonted.

The tribes of Reuben, Gad and half of Manasseh begged to stay, and Moses here portioned them their land on condition that the men go forward with their brethren to bear their share in the conquest of Canaan. One gets a humorous glimpse of the astute statesmanship of Moses in his order that these men head the march! Before the other tribes lay many battles, many dangers, before a secure, peaceful home could be hoped for, and before they could learn the settled farming life that was to be theirs. But they did not hesitate. Ready for the dangers of battle, ready for the labor of building a state, they crossed the stream, and with the crossing their history becomes part of the history of the western world. To this day, scattered, broken, oppressed, as they have been through long centuries, they are powerful factors in every land. But the descendants of Reuben, Gad and the half of Manasseh who chose the easier, simpler life, appeared thereafter little in the Hebrew history and were in time swallowed up altogether among the nomadic peoples that still inhabit, with their flocks and tents, the Syrian and Arabian plains.

Thanksgiving Day

Christian Endeavor, Epworth League and Luther League topic for November 23d: Thanksgiving Meetings.

SOME festivals are simply days of recreation, but there are others that should always keep their distinct characteristics, harking back to their origin. Such surely are the two national holidays, the Fourth of July and Thanksgiving Day. This latter has its cousinship with the autumn feast that has been known to all peoples in all times. After the gathering of the crops the Hebrews had the Feast of Tabernacles, and the Greeks, the Romans and the Britains held high celebration. For us Americans our harvest-day has an especial value in that it recalls definitely our beginnings; the hard days of the settlers when the crops grown in the small plantations along the Atlantic Coast stood between them and starvation.

The Roots of All Life

But it does for us, also, what the harvest feast should do for all people everywhere, brings us back to the foundation on which all human life rests. Seed-time and harvest never fail, but should they fail just once, over the wide earth, no wealth of mine or manufactory, or power of statesman or scientist could save us from starvation. We are as dependent on the early miracle of the loaves and the fishes as were our forefathers at Plymouth. A few small kernels put in the ground, and in a few weeks behold waving grain-fields. We say each seed contains the principle of life, but we are not much nearer to an understanding of that mystery, "the earth bringeth forth herbs, meet for them by whom it is dressed."

In simpler times, when practically each household raised its own food and its own raiment as well, it was not difficult to realize our utter dependence on the fruit of the earth, but now that, when my garden fails, I may, at the village store, buy the products of distant gardens, done up in sealed packages, with a United States pure-food stamp upon them, it is hard even for those whose task it is to plant and reap to realize what this mystery of Nature's yearly harvest means.

The Farmer's Ministry

Thanksgiving Day belongs to the beginning of the Nation, and it may be well on that day to take account of our national perils, and desserts, and mercies. But first of all it is the time for taking thought of that common, humble but wondrous matter, "first the blade, then the ear, then the full corn in the ear."

But to those whose fortune it is to watch the spring and the summer and the autumn lay their touch upon the fields Thanksgiving Day has a personal significance. The farmer has been set one of the noblest of earth's tasks. His it is to serve the absolute needs of his fellow men, his to aid the marvelous processes by which life is kept upon this planet. He ministers directly to the well-being of mankind. We talk of the independence of the farmer's life, we talk, too, of its hard labor and its small returns, but we do not talk enough of its dignity and inestimable worth. It is he who keeps life upon the earth.

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Our Young Folks' Department

A Real Thanksgiving After All—By Olive Allen

IT WAS Thanksgiving morning. Teddy jumped out of bed, shivering as the air struck him, and peered out of the window. Roads and fences had vanished, folded up without a wrinkle into great soft white fields. And still the snow fell, hanging the trees with "ermine too dear for an earl," Teddy understood now what that line from Longfellow's "First Snowfall" meant, and he hadn't known a bit when he learned it in the sunny school-room in Florida. You see, Teddy, although he was seven, had always lived in Florida and had never seen snow before this Thanksgiving morning when he pressed his face close to the window in his aunt's house in Maine.

Soon he began to dress. There was a stir in the halls, so he knew it was time. Besides, he could hardly wait for what the day was to bring. At eleven o'clock they would all pile into a big sleigh—Teddy had never been in a sleigh, of course—and ride across the fields and over those hidden fences to Grandma's. At least she was Nora's grandma, and Nora was the little cousin he was visiting. So he called her "Grandma" too.

He was dressed at last, except for a few buttons, and he went out into the hall. The first person he saw was a stranger wearing a blue and white dress under a big apron, and a perky cap on her head. Teddy felt hostile at once. She didn't look Thanksgivingly. She stopped and smiled kindly enough.

"Your name's Peter, isn't it?" she asked. "Well, Peter, I've got some bad news; the baby's sick with measles, and so you and Nora have got to stay right here and not go to your grandma's at all, for fear of carrying the germs. Nora is down-stairs already, and Lizzie will give you your breakfast. Your aunt won't leave the room where the baby is. Now be as good and quiet as you can."

He stared at her, outraged. It was too dreadful to believe. She slid into the baby's room and closed the door, and he went down-stairs feeling numb all over.

There at a little table sat Nora. She was just his age, and she wore her bushy light-brown hair just like his. She looked at him, and quivered, but tried to be brave.

"Will you sit down with me at this little table?" she said politely. "The big one won't be set for a long time. Lizzie says. Measles are so sure to go right through the family. Perhaps we won't have any Christmas, either," she gulped.

"I'm going right home," declared Teddy, plumping himself into a chair. "We always have turkey and things, and you've made me come all the way up here just for nothing."

"It's just as hard for me," remonstrated Nora; "and, anyway, you've seen the snow."

"I don't think snow is very interesting," he cried.

"And then there's me to play with."

"There's a little girl in Tampa I like much better,"

he growled, pulling his chair very rudely from the table and seizing a newspaper as if to read it.

Nora put her head down and cried, and neither child ate the nice breakfast Lizzie had cooked. Presently Nora got up and went into her play-room next door, while

Teddy still sulked. She tied on an apron and pretended she was a trained nurse, and then put her pet doll to bed with measles. While she was holding a spoon of medicine to its lips the big tabby cat came in, and Nora seized her and tucked her into the other doll's bed and ladled out a spoonful of the same dark mixture for her. When Nora tried to pour it down her throat she gave a terrible splutter and sneezed so



"There's a little girl in Tampa I like much better"

loud that Teddy ran to the door and began to laugh.

"You be the doctor," cried Nora, handing him the bottle. "It's Cinchona bark."

When that cat heard the word "bark" of course she thought a dog was coming, and she tried to jump up in bed and get ready to defend herself. The children laughed and pushed her back onto the pillows, but when she saw Teddy pick up the bottle again she made a leap through the air, carrying one of the sheets on her back, and fled through a door.

It looked so funny that the children sat down on the floor and laughed and laughed. They laughed so hard they didn't hear the jingle of sleigh-bells until the sleigh was right in front of the house. Then they jumped up and flew to the window. There stood a sleigh, with pumpkins hanging like a fringe around it.

"Get your hats and coats and take a ride," said one of their neighbors, who had heard about the measles and was sorry for them.

What a ride they had! There were no roads left, so they flew across fields, and once, in turning quickly to avoid the upstanding post of a fence, the sleigh tipped over, and Teddy and Nora rolled out in the snow. That was the most fun of all.

When at last they reached home they were very hungry.

"I suppose there's nothing to eat," Teddy sulked again as they opened the dining-room door on the way to the kitchen.

What do you suppose they saw? A great pumpkin, filled with red apples and nuts, in the middle of the big table. At each end a place was set, and by it was a carrot carved into the shape of a boat. Just then Lizzie came in and pushed the youngsters into the kitchen, where she opened the oven door to show them a fine turkey browning.

"You poor darlings," she said, "you shall just have the happiest Thanksgiving you ever had!"

And so they did. They ate a lot of everything they liked best. A great wood fire spluttered on one side ready to pop corn later. Then Nora took Teddy out and taught him how to coast on her flexible flyer.



She put her doll to bed with measles



When that cat heard the word "bark" of course she thought a dog was coming

New Themes for the Thanksgiving Feast

Marshmallow Innovations

By Ethel H. Durgin

MARSHMALLOWS may be used to make some delicious desserts and confections. For most purposes the best marshmallows to use are those that sell for about twenty cents a pound, as the more expensive varieties do not melt so satisfactorily. The recipes given below may be used with good results, and all the desserts will be found both dainty and appetizing.

MARSHMALLOW JELLY—Prepare gelatin as for lemon jelly. Pour a quarter of it into a bowl or mold, and when cool enough put in marshmallows. When hardened, pour in more of the gelatin mixture, lay more marshmallows, and when set add the rest of the gelatin. Invert mold, decorate with marshmallows, and serve with whipped cream.

FRUIT MARSHMALLOW PUDDING—Take one-half pound of marshmallows, cut in four pieces each, and lay in earthen dish. Pour over them one quart of any canned fruit with the juice. Let stand four or five hours, stirring occasionally. Just before serving stir in one pint of whipped cream.

MARSHMALLOW FUDGE—One-half pound of marshmallows, one cupful of water, two cupfuls of brown sugar, two ounces of chocolate, one cupful of powdered sugar and one-fourth teaspoonful of cream of tartar. Cook all the ingredients, except the marshmallows, and beat until it stiffens; add the chopped marshmallows, and beat again. Pour in buttered pan, and mark in squares.

WELLESLEY MARSHMALLOW FUDGE—Heat two cupfuls of granulated sugar and one cupful of rich milk (cream is better). Add two squares of chocolate, and boil until it hardens in cold water. Just before it is done add a small piece

of butter, then begin to stir in marshmallows, crushing and beating them with a spoon. Continue to stir in marshmallows after the fudge has been taken from the fire, until half a pound has been stirred into the fudge. Cool in sheets three quarters of an inch thick, and cut in cubes.

MARSHMALLOW FROSTING—Place marshmallows in small dish, and set the dish in hot water until marshmallows are melted, then spread on cake immediately. The quantity of marshmallows required varies according to the size of the cake and the thickness desired in the frosting.

PUMPKIN PIE—Select a well-ripened, hard-shelled pumpkin. Slice, peel, and cut into small pieces. Cook in a smooth iron kettle until soft enough to mash easily with a wire potato-masher. Then let it stew slowly, uncovered, until rather dry, being careful not to burn. Put through a colander, and it is ready to use. For each pie take about three fourths of a cupful of pumpkin, one small cupful of sugar, a pinch of salt, one teaspoonful each of cinnamon and ginger, or more if desired, one egg and two cupfuls of rich milk. Bake slowly and thoroughly in a moderate oven until a rich golden brown.

PORK CAKE—One pound of salt pork chopped very fine, one pint of boiling water poured on the pork, two cupfuls of sugar, one cupful of molasses, one heaping teaspoonful of cloves and of cinnamon, one pound of chopped raisins, two teaspoonfuls of soda, one small teaspoonful of baking-powder and about six cupfuls of flour (enough to make it rather thick, but not too stiff). Bake slowly, and be sure that it is done before taking from the oven. This cake will keep for weeks if wrapped in paraffin paper and kept in a tin box or a covered jar.

New Nutty Hints

By Joyce Massey

NO HOLIDAY dinner is complete without a plentiful supply of nuts, though not many housewives have realized their infinite possibilities in the menu itself.

For instance, instead of the usual heaped-up dish of mixed nuts served after dinner, try the more appealing candied nut-meats.

CANDIED NUTS—Boil together one cupful of brown sugar, one-fourth cupful of water, one tablespoonful of vinegar and a lump of butter until the mixture will thread when dropped from a spoon. Set this aside, and when it begins to cool and thicken dip each nut-meat into it, and lay the nuts on buttered paper to harden.

NUT BALLS—While there seems to be no end of recipes for nut wafers, the following is new, novel and unusually delicious. Beat the whites of two eggs to a stiff froth, and whip in three teaspoonfuls of sugar and one teaspoonful of vanilla flavoring. Then beat into this all the nut-meats the eggs will take up, usually about two cupfuls. Shape into balls, then lay on a buttered pan, and leave in a hot oven until browned.

NUTTY PUMPKIN PIES—Prepare the usual pumpkin filling for your pie, but before putting into the crust add a cupful of halved English walnuts. When the pie is baked, cover the top with mixed nut-meats. This makes a very pleasing variation from the ordinary pie.

JELLIED NUTS—Cranberry jelly has an added delicious taste if a handful of nut-meats is thrown into the jelly before it has hardened in the molds. If individual portions are to be served garnish also the top of the jelly with nuts.



Gran'pa's Stories

"Why, Bobbie, in those days we sometimes killed a bear for breakfast and a deer for dinner!"

Bobbie says, "Gee! I'd like to kill a bear," and quickly adds, "But you didn't have any Jell-O for dinner, did you?"

And gran'pa is obliged to admit that there was nothing quite so good as Jell-O in "those days."

All children love

JELL-O

with its delicious flavors—which are pure fruit flavors—and it is one of the good things to eat of which a "little more" may be taken without harm to either little or big stomachs.

You can prepare Jell-O more easily than anything else that everybody likes. It takes only a minute to do it.

The pure fruit Jell-O flavors are: Strawberry, Raspberry, Lemon, Orange, Peach, Cherry, Chocolate.

10c. each in a separate package, at any grocery or general storekeeper's.

Send for the beautiful new recipe book, with splendid pictures in colors. It tells how the daintiest and most delightful desserts can be made in the easiest way and at least expense. It is free.

THE GENESEE PURE FOOD CO.
Le Roy, N. Y., and
Bridgeburg, Can.

The name JELL-O is on every package in big red letters. If it isn't there, it isn't JELL-O.



A Religious Farce---By Mary B. Bryan

THE children's service carried out by children of the Sunday-school has grown from the missionary concerts of a generation and more ago. In those programs very solid information was interspersed with responsive readings and classical hymns. Christmas services followed, for which Longfellow, Proctor, Tennyson, and the like, were drawn upon. Such services have now become usual, but they have sadly altered and cheapened. New writers pour forth new music and new words with a fluency that recalls the adage about easy writing. According to the Hebrew law, it was a lamb without blemish that was to be brought unto the Lord, but for high religious celebrations to-day we use what would disgrace a high-school class in English. Our churches, saving the Episcopal, and the Roman Catholic, cut off from the advantages as well as the disadvantages of a liturgy, are at the mercy of any caprice of taste that may attack their leaders.

Time like an ever-rolling stream
Bears all its sons away.
They fly forgotten, as a dream
Dies at the opening day.

It was not a particularly gay stanza, and it was gentler, than another favorite,

Hark from the tombs a doleful sound.

Yet if a choice must be made between such sincere if doleful reflections and the following lines from a service of a popular publisher one may well be thankful to have belonged to an earlier dispensation.

Says one of "six little gardeners," standing in the limelight of the platform, backed against the communion table:

I planted seeds that wouldn't grow.
It wasn't my fault, that I know.
I dug them up each day and night
To see if they were growing right.
What have I raised do you suppose?
A crop of freckles on my nose.

The astounded listener asks what such vulgar nonsense, together with the whole paraphernalia of stage directions, "gingham gowns and sunbonnets," "eleven young ladies in flowing white" and "hoop drills" have to do with a Sunday-school, whose mission, if it have one at all, is to make what we believe divine at once sacred and real to children.

These quotations are no isolated specimens. A collection covering the last ten years shows two-hour programs all on the same scheme; jingling airs,

mingled with verses such as have been quoted, spoken to a series of motions, to the waving of yellow crepe paper or to the ringing of bells. If the clergyman be of so conventional a mind there may be a prayer and a benediction to recall the fact that this is intended for a form of worship! In a vain attempt at novelty such extraordinarily banal inventions as "The Voyage of the Children" are put forth. The parts of the service are labeled with nautical terms, reminiscent of "Pinafore," and the songs are suited to the idea, a fair sample being:

A beautiful trip in our Sunday ship,
Message of hope and cheer.
Safely we glide with the Savior as guide,
Never a storm to fear.

Even when some tinge of a religious idea is admitted it is reduced to doggerel such as in an "Exercise for Little Tots," where "What Jesus says" appears as:

Friends may desert you and ever disown,
But they who seek Me are never alone.

Shades of Tate and Brady defend us, that we should see the weakness of their version of the Psalms surpassed!

The church and the church's school can never hope to be as amusing as a vaudeville, and instead of attempting such profane imitation should stand on their own sweet dignity. Even that ditty,

Oh, children's day was made for boys,
With flags and banners gay,

shouted at the top of the lungs, will not make a service compete in fascination with a circus. The Sunday-school can be advertised indefinitely by means of "Flower Drills" and "Rose-Wreathed Scepters," without ever attaining to rivalry with moving-picture shows.

In one way the harm done is negative, for children simply forget trash. They may be trusted to commit twenty meaningless lines accurately to memory, and to lose them even more thoroughly within a week. Why not? The sounding syllables of a masterpiece ring in the memory, but the normal mind rejects what is utterly futile. The small child who before an admiring audience picks a dove out of a paper lily will remember that in reality the dove was a stuffed pigeon, but never that it was meant to teach

The anxious doubts and fears shall cease,
For Easter comes to bring us peace—
The priceless gift of Heaven above
Descending on us like a dove.

If children's services are to have any value they must attract by other means

than trifling songs and flippant recitations. It is a fact that children like such noble hymns as "The Son of God goes forth to war" better than these jingles by the yard. Neither the Roman nor the Anglican communions, in which such travesties of devotional service would never be permitted, has lost its hold on its children. Indeed no church is so able and skilful as the Roman Catholic in its use of the spectacular, nor the Anglican in its knowledge of the value of concerted performance. But never have they sold their birth-right of dignity and reverence for a mess of pottage. There is real opportunity offered in this custom of special children's services. Stores of great religious poetry are ready to hand, and all unused; portions of the "Celestial Country" that every child would love; recitations for groups, as "Ye Sons and Daughters of the King," to know which is to be heir to the ages; poems by Palmer, Heber, Herbert, and the long series of devout and scholarly hymn-writers of England and America, of Germany and of the Greek and Latin churches. In time we may even come back to the treasure within the covers of the Bible, and passages from the Hebrew poets and sages be the certain possession of every child of the church school.

By this present method we are losing more than a little knowledge. We are bartering, for nothing, our senses of a fit and beautiful expression for sacred experiences. All over France, at midnight, upon Christmas eve, rings out the carol, "Noël, Noël." If our present providers of programs had their way each parish would sing a different song, and new ones each season would crowd into oblivion the glorious words of this old carol, which for long years to the gay and novelty-loving French people, alike to the aged and to the little children, have spoken the gladness of the holiest festival of the year.

Perennial Verbenas

By Mattie Lee Hausgen

THE first year it is best to buy the small plants in bloom: this insures attractive colors. Plant in very rich ground, and keep well watered. After frost, when they have stopped blooming, lay the long branches of the plants over each other without breaking, and place a weight on top. Cover lightly with leaves or straw. In the spring, when all danger of frost has passed, uncover, and break dead branches away. The small plants, from the dropped seed, will be found growing nicely underneath.

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THE COCA-COLA CO.
Atlanta, Ga.

How to Dress Well On Little Money

Miss Gould Tells This Secret to FARM AND FIRESIDE Readers

TO-DAY there are so many freak fashions being shown and adopted by American women that I feel pretty sure my Farm and Fireside good friends will be glad to hear that I believe in keeping to the middle course in style.

It is just second nature to every one of us to want to look as well and as stylish as we possibly can, but, on the other hand, if we have any common sense we don't want to adopt every strange and weird style just because Paris says it is the smartest thing out.

The woman who keeps to the middle course is the woman, generally speaking, who is appropriately and attractively dressed.

Now let me tell you what I mean by the middle course, for instance, in regard to skirts. The new skirts which the most fashionable dress-makers and tailors are making this season are wide just where they ought not to be and narrow in the most inconvenient and impractical of places. They are wide at the hips, and many of them laid in folds at the waist-line, while down toward the feet they actually measure no more than a yard, and sometimes less.

I feel that for the average busy, sensible woman—the woman who can't have a new dress every time she sees one she likes—it is a most foolish thing to have her skirt made so extremely narrow at the foot. On the other hand, I think it is equally unwise for her to wear a skirt, say, three and a half to four yards around at the bottom. If she does the latter she practically labels herself a back number.

Now the safe and sane middle course for her to adopt, and one that I so enthusiastically believe in, is to make her skirt with some fulness at the waist-line and around the hips, and then to have it measure from one and one-half to two and one-half yards around the bottom. In this way her new skirt will carry out in a general way the line of fashion and yet will not be the extreme freak style, nor will it be uncomfortable. Now do you see what I mean about the middle course?

And it is the same way in hats. To-day the hat is small. The Paris styles are pulled well down on the head and frequently at a rakish angle, and the trimming—I really shudder when I think of it—either sticks straight out at the back, or it sticks up straight somewhere else, generally at the left side, but it must stick up. It must wave in the breeze and be a source of inconvenience not only to the wearer, but to every one else who comes in contact with it.

Let the trimming stand up at the back or at the left side, if you wish, but lower it and use ribbon arranged in graceful loops, or a pretty feather, or soft wings, but don't buy trimmings to adorn your hat that look like a rooster's tail after a fight; or, don't select an ostrich feather that looks as if it had battled long with wind and rain as well as other hardships.

Follow the fashions, but don't ignore your own individual taste, and never, never let fashion be your master.

One of the first essentials in having successful clothes is to use the right pattern, and, of course, I feel that the right pattern is the Woman's Home Companion pattern, and this is why I feel so: You see I personally design them, and each pattern represents my idea of this particular style. Then I like the patterns because there is a certain originality and smartness about every dress made from one. You don't see it on every woman everywhere.

Then, too, the pattern goes together so easily. It has style, and whatever size you happen to order this is exactly the size you get. Our 36 bust measures exactly thirty-six inches.

You know Woman's Home Companion patterns are not on sale in stores, and we have no agents. If you want to get a Woman's Home Companion pattern you write to one of our pattern depots. That's the only way you can get one, and it is an easy way, and the orders are filled most promptly.

After all, there are few of us who can ignore that most important word, economy. The majority of us have to economize in our clothes, and it is economy, for more reasons than one, to use a Woman's Home Companion pattern, not only because the price is ten cents, but because the dress made from the pattern is never a failure. There is no material to be thrown away ruined, because your dress is a fit, not a misfit.

The easiest way to order Woman's Home Companion patterns is to use the coupon below:

Grace M. Gould

PATTERN COUPON

Enclosed please find.....cents, for which please send me the following patterns:

No.....	Size.....	Name.....
No.....	Size.....	Address.....
No.....	Size.....	
No.....	Size.....	

Send to any of the following FARM AND FIRESIDE Offices:

Pattern Department, FARM AND FIRESIDE, 381 Fourth Avenue, New York City
Pattern Department, FARM AND FIRESIDE, Springfield, Ohio
Pattern Department, FARM AND FIRESIDE, 1554 California St., Denver, Colorado

Best Dinner in November

By Jessie V. K. Burchard

THE leading idea of this national holiday must not be submerged in the ambition of the housewife to get up a dinner that will exceed any preceding one in its collection of delicious viands. If she attempts too much she will find herself worn out when the dinner is over, and in a state of mind far from thankful. I am giving a plain menu which I have tried myself, and which may be prepared with the minimum expenditure of strength and energy.

Cream-of-Tomato Soup	Roast Turkey
Cranberry Jelly	Spiced Peaches
Scalloped Onions	Mashed Potatoes
Candied Sweet Potatoes	Cabbage Salad, French Dressing
Pumpkin Custard	Graham Pudding
Nuts	Raisins
Coffee	

So much of this dinner may be prepared the day before that the work on the day itself is not too tiresome. The tomato may be seasoned and strained for the soup, the turkey stuffed, the cranberry jelly made, the onions par-boiled and arranged in a baking-dish, sweet potatoes boiled, sliced and placed in their baker, and both custard and pudding made. Then on Thanksgiving morning the turkey is put into the oven, the potatoes pared, the cabbage shredded, the Graham pudding heated, sauce made for it, the onions and sweet potatoes run into the oven to brown, and the housewife may appear at the feast in a serene and unharassed frame of mind.

A center decoration for the table should show some of the fruits of the earth for which we all give thanks, and in the one illustrated a small pumpkin has a little socket cut in its top to hold a tall green candle. Six well-shaped and symmetrical carrots surround the pumpkin, each holding a smaller candle, and a thick wreath of parsley encircles the carrots and forms a large circle around the pumpkin. A smaller wreath is around the base of the pumpkin, and a few sprigs around the large candle.

CREAM-OF-TOMATO SOUP—Strain enough canned tomatoes to make a pint of liquid, season well with salt, pepper and a teaspoonful of sugar. Set this away till just before dinner, then bring it to a boil, add one-half level teaspoonful of soda, and let it foam up and subside. Then add three cupfuls of milk, either hot or cold, and one tablespoonful of cracker-dust. If the flavor of onion is liked, a teaspoonful of the juice or a little onion salt may be added.

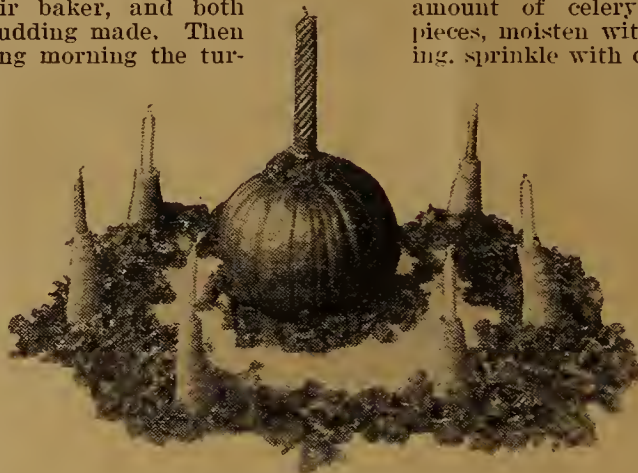
TURKEY STUFFING—There are so many good ways to prepare the stuffing for the turkey that it depends on the taste of the family to decide which shall be used. One is safe usually in declaring for bread stuffing. Remove the inside from a large loaf of stale bread, melt enough butter to moisten it well, season with salt and pepper, and you have the foundation for a number of stuffings. The bread may be used as it is, or a cupful of small oysters may be drained from their liquor and added; half a pound of sausage meat makes a delicious though very rich addition. I once had a German cook who made an excellent stuffing in this manner: She boiled chestnuts, cut them open and scooped out the meat with a spoon. She chopped the giblets of the turkey fine and fried them in butter, and when they were brown she added the chestnuts, two or three cupfuls of them, and enough bread-crumbs to fill the turkey, seasoned it well and proceeded as usual. This is really the best filling for turkey that I ever tasted. Whatever you select, let the work be done the day before and the turkey set aside in roaster till morning.

CRANBERRY JELLY—Let a quart of cranberries cook in a pint of water till the skins burst, add a pint of granulated sugar, and let simmer for twenty minutes longer. Wet the inside of individual molds in cold water, pour in the cranberries, and let stand over night. At dinner-time turn the molds out on lettuce-leaves.

GRAHAM PUDDING—Here is a hot pudding that even the children may eat with impunity. It is simple, but excellent. One cupful of molasses, one cupful of thick, sour milk, one-half cupful of raisins, two cupfuls of Graham flour and one teaspoonful of soda. Mix and beat well together, put into a buttered mold, and steam three hours. In the fireless cooker it can be left overnight and reheated for dinner. Serve with it this simple sauce. Mix one tablespoonful of flour, one tablespoonful of butter and three tablespoonfuls of sugar well together. Add a cup of boiling water, boil for a moment, flavor as preferred, and stand over hot water till required.

CANDIED SWEET POTATOES—Cold boiled sweet potatoes are sliced and arranged in layers in a baking-dish, each layer being sprinkled with salt, pepper and sugar and dotted generously with butter. Let brown for half an hour in the oven. Both this and the onions are served in the baking-dishes.

CABBAGE SALAD—Shred white cabbage very fine, and let stand for an hour in very cold water or in ice water. Drain dry as possible, mix with an equal amount of celery cut in small pieces, moisten with French dressing, sprinkle with chopped parsley, and serve very cold.



A center decoration for the table

PUMPKIN CUSTARD—This is a variation on the time-honored pumpkin pie and is very good. The pumpkin should be steamed, or it may be put into the oven whole, baked till the shell is easily

pierced, then removed from the oven and allowed to cool a little, cut it open, take out the seeds, and with a spoon scoop out the pumpkin, which should be put through a sieve, two tablespoonfuls of butter added to a quart of pulp and set aside overnight. When ready to make the custard add to the pumpkin a pint of milk, the yolks of six eggs beaten with a cupful of sugar, a teaspoonful of ground cinnamon, the juice and grated rind of a lemon. Mix well, turn into custard cups, and bake in a moderate oven for an hour. Beat the whites of the eggs till they are very dry and light, add half a cupful of powdered sugar, and beat again. When the custards are cool heap this meringue on them, and let brown lightly in a cool oven. Serve cold.

SCALLOPED ONIONS—Peel onions, slice and parboil till tender in salted water. Drain, make a white sauce by creaming together a tablespoonful each of butter and flour, adding a cupful of cold milk and stirring till it boils. Season with salt and pepper. Butter a baking-dish, put in a layer of sauce, a layer of onions, and so on till all is used. Cover with buttered crumbs, and set away till half an hour before dinner, when it should be browned in the oven.

Naturally the individual taste may dictate changes in this menu. Instead of the onions, cauliflower may be preferred, and is delicious when carefully boiled, separated into florets, which are put into individual baking-dishes, covered with white sauce, topped with buttered crumbs and browned in the oven.

A Spanish cream is a delicate and pretty cold dessert, which might also be made the day before. Put a quart of milk into a double boiler to heat with two tablespoonfuls of powdered gelatin. Beat the yolks of four eggs with one cupful of sugar, and when the gelatin is quite dissolved add the eggs to the milk, and cook till it thickens like custard. Take from the fire, and when cool stir in the stiffly-beaten whites of the eggs, a teaspoonful of vanilla and a little pinch of salt. Pour into a mold, and set in a cold place overnight. This is delicious served with whipped cream.

Celery cut into inch lengths, boiled in salted water until tender, mixed with white sauce and browned like the cauliflower is excellent. Dried Lima beans soaked overnight, cooked in the fireless cooker for twenty-four hours, then reheated with plenty of butter and well seasoned are always acceptable.

Useful Christmas Gifts

When Made of Pretty Materials
These Designs Fill Many Wants



No. 1908

The useful Christmas gift is always acceptable. Shown on this page are some practical designs which suggest the useful gift. Made of pretty materials the negligees and wrappers will please any woman, while a man is sure to like the dressing gown if it is made of some good-looking warm material



No. 2060

No. 1908—Fitted
Dressing Sacque

32 to 44 bust. Material for 36-inch bust, four and one-half yards of twenty-two-inch material, or two and one-fourth yards of thirty-six-inch material. The price of this pattern is ten cents



No. 1906



No. 1908



No. 1906



No. 1922

No. 1906 — Room
Gown: Large
Collar

32, 36, 40 and 44 bust. Material for 36-inch bust, seven and five-eighths yards of twenty-seven-inch material, or four and one-eighth yards of forty-four-inch. This pattern, ten cents



No. 1712



No. 1712

No. 1712—Misses' Em-
pire Wrapper

12 to 16 years. Material required for 14 years, four and one-half yards of twenty-four-inch material, or three yards of thirty-six-inch material. The price of this pattern is ten cents



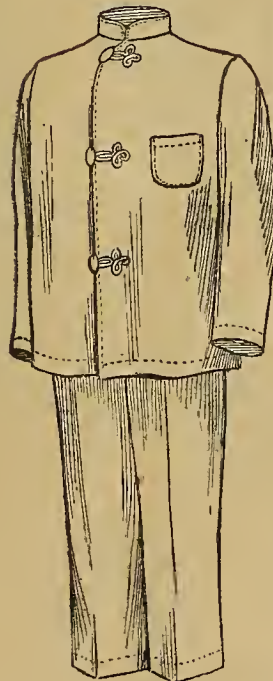
No. 1022

No. 1022 — Apron
with Cuffs and
Cap

Pattern cut in one size only, medium, 36-inch bust. Quantity of material required, three and one-fourth yards of twenty-seven-inch material. The price of this pattern is ten cents



No. 1441



No. 1441

No. 1441—Boy's Pajamas

2 to 12 years. Material for 6 years, three and one-half yards of twenty-seven-inch material, or two and one-eighth yards of thirty-six-inch material. Price of pattern, ten cents



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In a year or less six of your teeth may be seriously damaged by lack of proper care. Proper care does not mean that you have to spend an hour a day scrubbing your teeth. Just two or three minutes in the morning and two or three at night.

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The easiest way to order Woman's Home Companion patterns is to use the coupon on the opposite page.

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with Paper Patterns



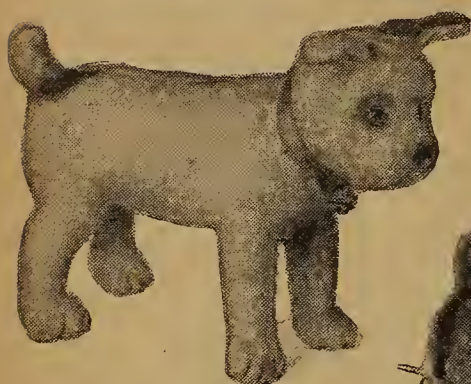
No. 2427—One-Piece Apron with Pockets
2 to 6 years. The price of this pattern is ten cents



No. 1915—Doll's Play Dress
and Apron
Cut for dolls 14, 18 and 22 inches high.
The price of this pattern is ten cents



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Cut in one size for 18-inch doll. Price of pattern, ten cents



No. 1917—Stuffed Dog
Cut in one size. The price
of this pattern is ten cents

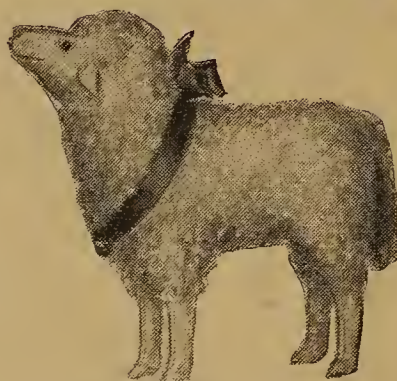
The apron, pattern No. 2427, may be given a little boy with the pockets containing a penny ruler, two pencils, a small pad of paper and a toy hammer, while for a little girl it makes an attractive present if it carries a tiny doll and her clothes, some crayons, a book to color with the crayons and a mud-pie mold



No. 1653—Gray
Squirrel
Cut in one size. The price
of this pattern is ten cents



No. 1652—Br'er Rabbit
Cut in one size. The price
of this pattern is ten cents



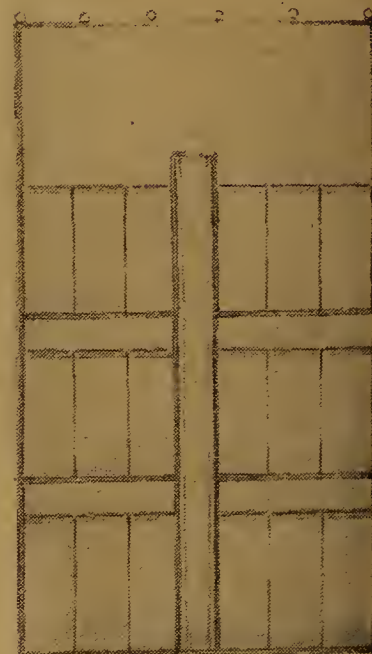
No. 1918—Woolly Lamb
Cut in one size. Price
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No. 1648—Red Fox
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No. 840—Boy Doll's Outfit—Suit
and Overalls
Cut for doll 22 inches high. The
price of this pattern is ten cents



No. 2430—Umbrella-and-Shoe
Bag
Price of pattern, ten cents



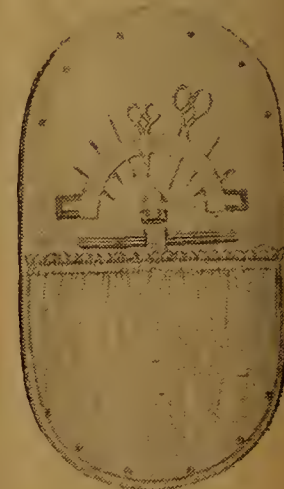
No. 2428—Slipper-Case
Price of pattern, ten cents



The slipper-case, No. 2428,
when closed and fastened



The sewing-case, No. 2429,
when closed and fastened



No. 2429—Folding Sew-
ing-Case
Price of pattern, ten cents



No. 2419—Santa Claus Coat and
Hood
Cut in one size only. Pattern, ten cents

Golden Locks and Her Baby Sisters

Three Lovely Dolls
for
Farm and Fireside
Boys and Girls



*Golden Locks
is a
Real Beauty*



Three Fine Gifts
Golden Locks—1 Big Doll
27 inches tall—larger than a real baby.
2 small dollies, much nicer
than the average doll

*The limbs are
movable and the
doll won't break*



About Golden Locks

SURELY all our little girl friends would love to meet Golden Locks and have her for their very own. She is just the finest playmate any little girl could wish for, and you will love her as soon as you see her pretty face, bright curly hair and big brown eyes. Golden Locks is over two feet high, and baby clothes will just fit her. She can sit up in a chair or sleep in baby's bed, and the finest thing of all Golden Locks and her sisters are practically indestructible. You can bend their legs or arms without fear of breaking them. Such dolls are lots better for little folk than china dolls. They will not break, nor can you soil their pretty hair or lose their eyes. Golden Locks will be your pal for a long time, and how you will love her!

**Every
Little
Girl
Wants
to Meet
Golden
Locks
and
Her
Sisters**

**No Doll
Family
is
Complete
Unless
You
Have
These
Three
Big
Dolls**

The Baby Sisters

THESE dolls will make any little girl or boy happy. They can have doll parties and entertain their little friends. If you are a little boy or girl ask your mother or father to send for these dolls, or if you know some little friend whom you want to make happy with a gift accept the below offers at once and give them the surprise of their life. Remember, we are giving these three big dolls away with *Farm and Fireside*. All three dolls are beautifully and brilliantly painted in many colors on one large sheet of heavy cloth, all ready to sew up on a machine and stuff. Anyone can follow out the instructions and have the dolls all ready in ten minutes' time. Golden Locks and her sisters want to visit you real soon.

How to Win

OUR doll offers are so liberal and easy that there is not a single excuse why every *Farm and Fireside* little girl should not be made happy with Golden Locks and her sisters. Any one of these dolls would be a liberal present, but you will get all three of them by accepting one of our offers. It is important that you send your order right away, because our supply of the Golden Locks family is limited, but if you mail your order within the next ten days we guarantee that you will receive the three dolls—the big doll, Golden Locks, twenty-seven inches tall, and her two sisters. Here are the offers:

Offer No. 1

Send 50 cents for a one-year subscription to *Farm and Fireside*, either new or renewal. Also be sure to send us the names and addresses of four of your friends who have children. The three dolls will be sent you by return mail, all charges prepaid.

Offer No. 2

Get two of your friends to hand you 35 cents each for a one-year subscription to *Farm and Fireside*. Also be sure to send us the names and addresses of four of your friends who have children. Send us the 70 cents, together with the names and addresses, and the three dolls will be sent you by return mail, all charges prepaid, as special premium.

Mail your order to-day to

Farm and Fireside, Springfield, Ohio

Special Doll Coupon

Farm and Fireside, Springfield, Ohio

Find enclosed 50c for a one-year subscription to *Farm and Fireside* and Golden Locks and her two sisters.

Send *Farm and Fireside* to

Name _____

P. O. _____ R.F.D. _____ State _____

If you want Golden Locks sent to different address than above, write name below. Send Golden Locks and her sisters to

Name _____

P. O. _____ R.F.D. _____ State _____

Here are the names and addresses of four of my friends who have children:

Name _____ Address _____

Name _____ Address _____

Name _____ Address _____

Name _____ Address _____

You may send your order on a separate sheet of paper if you wish.

A Page Out of Santa Claus' Diary

Woodsy Picture-Frames

Here are two picture or calendar frames on this page, one of them made from the bark of the pine-tree, the other of palmetto fiber. They are easy presents for the dwellers in our Southern States to make. The bark is taken from a dead tree after the little insects called sawyers have eaten out the sap bark. Sometimes the hole is already present, otherwise it must be cut, shaped and beveled with a sharp knife; the picture



Jabot ornament of beads

is laid against it and a paper pasted over the back to hold it in place.

The palmetto fiber is obtained from the root. Dig up the plant and chop off the top and the lower part of the root and peel out the sections that compose the upper part of the root. The fiber is in layers between.

The pine bark is rather brittle, but with care it can be fashioned into rustic boxes by attaching it to ordinary boxes by means of nails. MRS. E. L. EVANS.



Bead Flower Spray

One of the new fancies in neckwear is the flower spray of fine French beads, opaque and opalescent, in soft colors. The flowers are simply fashioned with beads strung on hair-wire.

The daisy at sight explains its own construction. The beads are opaque—white for the petals and yellow for the center. String thirty-four beads on wire and curve to form a slender loop, leaving a five-inch end of wire and one long end. Twist the two wires close to the bottom of the daisy loop. String twelve beads and pass the wire across the beaded loop between the seventeenth and eighteenth beads, and down on the wrong side to the beginning. Twist the wire at the base of the petal. On the same length of wire make the next petal, and so on. There are nine petals. The center is made similarly with twelve beads for the circle and a crosspiece of three beads, in this case leaving two five-inch ends of wire. Twist the wires and slip them through the daisy center. Then twist all four wires together to form the stem. The stem may be wound with baby ribbon or embroidery silk.

For the double fuchsia, several shades of lavender, green and white, and opalescent beads will be required. Make the outside leaves as shown in working detail—five leaves with forty-eight beads to a loop, green and tan and white. These leaves are later shaped to form the calyx of the flower.

Make the next layer of petals five, as shown in working detail. The outside loop is composed of thirty-eight beads; the inner loop is made of opalescent beads, something like the daisy petal,



A pine-bark frame

with thirty-two beads, and a cross loop of twelve beads on front of wire cross-piece and also twelve beads on back wire crossing.

The next layer of petals, four in number, is made like the preceding, only smaller. Lavender opalescent beads; thirty-four beads for the outer loop; twenty-eight inner loop; nine each for front and back halves of the crosspiece.

The center petals are simply slender loops of twenty-four beads (see working detail), four loops of pale yellow (or purple opalescent) beads, and a single center loop of opaque yellow, eighteen beads.

Place the three petal layers one on top of the other; then shape petals to natural position. Twist the wires tightly. Form the calyx from the lower half of the long leaves. Slip the wire stems of petal layers through the center of the calyx, leaving one-half inch of wire between layer petals and calyx point. Then bend the five leaves up close to the wire stem and fasten with fine wire

invisibly. After the calyx is formed, curve the leaves outwards naturally.

Twist all the wires together closely to form a substantial stem. Wind tightly with green satin, or velvet baby ribbon or silk floss.

Finish with bow of baby ribbon—several loops and ends.

Beads can be had at most art stores. EMMA L. H. ROWE.



A Book-Cover Bag

Cut a paper pattern to fit the ordinary book, making the inside lap almost reach the center. Sew the sides

together. Cut two strips double and machine-stitch them so they lie flat. Sew them by machine to the inside of the cover, allowing enough room for the arm to slip through. The embroidery is very simple, being done in outline-stitch of bright Bulgarian colors. The figures graduate from the largest at the bottom to smaller ones above. The scallop is worked in solid of bright red. Silks can be used, but the mercerized cottons are preferable, as they will stand more wear and washing. There is a shaded crewel made which would work in admirably on this piece, as it combines tan, brown, old blue, gold and green. The scallop could also be worked of this and the effect would be very oriental. H. KAUFMAN.



A Novel Gift for the Children

The recent revival of interest in keeping fish as pets is largely due to the advent of what are called balanced aquariums. In these, by a carefully arranged combination of animal and vegetable life, the conditions that exist in nature are practically reproduced. The result is a body of water that need seldom be changed and that is practically self-sustaining.

One way to buy an aquarium is to purchase it complete at some store, but, as a matter of fact, any transparent vessel capable of holding water will serve as a satisfactory receptacle for fish, whether it be a simple Mason jar or a home-made tank constructed of window-glass, putty, aquarium cement (a special preparation) and wooden strips. The main essential is to have a tank perfectly tight and clean, with no paint or injurious material to contaminate the water. This water, to begin with, should be just as pure as the water we drink. Spring or well water is far better than water from a cistern.

The number of fish to put in an aquarium should be on a basis of one gallon of water for each fish of say three inches in length. That is to say, if your tank holds but ten gallons, do not try to keep twenty-five fish in it. With smaller fish the number can be very much increased. The capacity of a rectangular tank can be easily computed by allowing 231 cubic inches for each gallon, but it is perfectly easy in the case of any tank or globe

actually to measure its capacity before stocking it with the fish.

The bottom should be covered with pebbles and sand to a depth of about two inches, and the plants rooted in it. A great variety of aquatic plants are used for this purpose. Fanwort (*Cabomba Caroliniana*) is the most valuable of all. Hornwort, water starwort, tape grass, water poppy, willow moss, and also a number of floating plants such as duckweed, Hydrocharis, hyacinths, Lemna and Salvinia are available. Plants to stock an aquarium will cost anywhere from ten cents to fifty cents a bunch.

Of course the most important element will be the fish, and the basis of all aquaria is goldfish or golden carp. The common ones can be bought for ten cents each. Nearly all varieties of goldfish are constantly changing color, which varies from white to velvety black, with various shades of amber, silver and golden red.

There is a great variety of Japanese goldfish. The more common "fan-tails," "fringe-tails" and "comets" cost from twenty-five cents to \$5 apiece, and those bulging-eyed aristocrats of the funny world, the telescope fish, will cost from \$5 apiece up, according to shape, color, size, eyes, etc.

The finest Japanese fish ever brought to America were presented by the Mikado to General Grant in his famous trip around the world. They were so remarkable that P. T. Barnum hired them for one year for exhibition purposes in his show, and actually put up a bond of \$20,000 to guarantee their safe return, with an admiral of the United States Navy, to whom General Grant had presented them. These fish have bred in America, and occasionally their descendants are offered for sale.

In addition to the Japanese goldfish there are many other varieties of rare fancy fish that are very popular; bitterling, golden orf, banded tench, banded snuffish, paradise fish, elritzen and golden tench. In many aquariums are kept the fish of our boyhood days as well as the common native species, such as sunfish, dace, rockfish, minnows, catfish, sticklebacks, mirror carp, chubs, and even lizards, or newts, small eels, alligators, and turtles and frogs of all shapes, sizes and colors.

It is always well to have a few snails, a tadpole or two and some newts in self-sustaining aquariums, as they are scavengers and will consume much of the decaying vegetable matter and refuse and, what is more important, keep in check the algae, or green scum, that will form in still bodies of fresh water. Even in snails there are aristocratic Japanese kinds.

Self-sustaining salt-water aquariums are possible, though less common than those of fresh water. Of course in this case the inhabitants would be the young of various sea fish, crabs, shrimps, starfish, anemones, and so on.

An aquarium to be properly self-sustaining, and to keep in good condition, should not be overcrowded. It should be located in some corner by an east or north window, but where the sunlight can reach it for at least an hour or two a day. The best temperature at which to keep it is from sixty to seventy degrees Fahrenheit. Its daily care consists simply in feeding the fish with prepared wafers, fish-food or dried ants' eggs.

The fish should never have more than they will eat up clean at a time.

Fish are subject to a few diseases, but for the amateur the principal thing to remember is that salt water is the universal remedy. If a fish is not in usual health, and the trouble is neither due to overcrowding or overfeeding, a five-minute bath in salt water every day for a week will bring him back to health.

Goldfish often live to a great age. Some goldfish in a Washington aquarium are known to be fifty years old, and by careful measurement have not grown in over thirty years.

If one is situated near some brook or pool most of the small creatures with which to stock an aquarium can be



A frame of palmetto fiber

caught in the neighborhood. A small net of fine mesh with a strong frame, and a minnow-bucket, are the only tools necessary. The various aquatic plants can be collected also, making the cost of the outfit simply what the tank costs.

Indiscriminate mixing of fish often causes trouble, especially with goldfish, which cannot live at peace with sunfish, catfish, eels, rockfish or crawfish, but are eventually killed. F. H. SWEET.



Practical Dresser-Scarf

This is made of heavy white linen having a solid filled scallop bordering the four sides. This style of scarf should fit the dresser-top with the points of the scallop reaching just to the edge. Chiffonier, stand and table cover can be made to match. The grades of linen which come for sheeting are the most satisfactory in quality and price for this work. The very dainty design of baskets of flowers and butterflies are well adapted for the set, and can be worked in several ways. I have used the eyelet work for the flowers and baskets, while the stems, leaves and butterflies I worked solid in stem and satin stitches. If desired, the leaves and the body and centers of wings of the butterflies could be worked in eyelets also. This would give a lighter effect to the work. Eyelets will never wear ragged if you will first make small outline stitches on the stamping of each eyelet, then pierce it with your bone stiletto or sharp-pointed scissors. Bring your thread up outside the outlining and pass into the hole, drawing it tight each time. With a little practice the size and shape will soon become uniform and then the work progresses rapidly. The satin-stitch, or French embroidery, as it is often called, is padded with a few running stitches of the same thread and worked over on a slant. Always start a leaf at the point and work toward the base. For the scallop I like a twisted cotton with a soft padding. If you have not the regular padding floss, use white darning cotton. Care should always be taken to make the buttonhole stitches close together. After I work a padded scallop of this style and have laundered my piece, I cut the edges close and make a second buttonhole catching into each stitch. This will never fray. Another good way to keep heavy linen from fraying is to leave about one fourth of an inch of the linen when cutting out the



A linen dresser-scarf

scallop, turn this back and with a needle and fine thread hem it to the scallop on the under side.

This same design can be stamped on sheer linen and worked all in eyelets and stem stitch. For such a scarf I should finish the edge with two-inch wide Cluny lace sewed to the scallop on the under side. This can be used over a color or not, as desired. If worked in colors, which are much used now, I should not use the eyelets but keep it all in satin and stem stitches. Brown baskets, brown and yellow butterflies, pink flowers and green leaves, make a good combination.

For eyelet and satin stitch I prefer the soft-finished mercerized cottons. These come four or six strands and can be used so or separated according to the degree of fineness one wishes. H. KAUFMAN.

Saving Coal—By Mary Hamilton Talbott

Probably the most economical house-keeper would be appalled were it possible to figure out the monthly waste in her kitchen and show it to her in tabulated form. Opposite "Coal" would undoubtedly appear a big figure, which would remind her painfully of clothes and recreations which she and the family might have had instead of letting them blow up the chimney. Mrs. Talbott's advice is valuable and has a particular timeliness before the preparation of the Thanksgiving dinner. Let us save our coal and invest some of the saving in a fatter turkey, some of that pork cake about which we talk on another page, or candied nuts and marshmallow fluffiness.

EDITOR.

ALTHOUGH women cannot be expected to make two blades of grass grow where one grew before—that being man's, the producer's, part—they can by a little care and watchfulness learn to use one ton of coal where two were used before.

"But you cannot scrimp on coal and get any kind of satisfactory results," says someone. It is quite true that coal is not as easily regulated as other fuels, it cannot be brought to a point of efficiency at a moment's notice, nor can it be put out the moment its usefulness is over, but this fact does not prevent economizing on coal in many ways if one will take the trouble to do so.

See That the Draft is Good

The first essential in the saving of coal is a perfect draft. When the fire is built a sufficient amount of light material must be used to create a good flame and heat the chimney, for until this is heated no draft is produced. After it is once heated the fire may be kept at the proper temperature. In almost every stove there is a direct draft, called a "damper," the manipulation of which either saves or wastes the fuel. Tons of coal go up the chimney without giving any good results in heat if one forgets to watch this part of the stove. General principles for the manipulation of dampers are simple enough. The draft slide near the base of the fire-box should be open to start or renew the fire, and also the damper connected with the pipe on top of the stove. When it is desirable to hold the heat, as for baking, the reverse condition is necessary. The slide above the fire-box provides a means of checking the fire when necessary by admitting cold air to the surface.

Anthracite coal is nearly a solid carbon, hence burns slowly and is most easily managed and arranged to "keep." In the morning, when a quick fire is needed, do not thoroughly shake or rake it down, simply loosen it up, sprinkle over the top a little coal and open all the drafts. The moment the breakfast is over rake out the ashes thoroughly, sprinkle over a little coal, open the drafts, and just as soon as a blue flame appears over the top of the coal close the pipe damper and the drafts in the front of the stove, and the fire is "fixed" and can in a moment be made sufficiently hot for baking or cooking. If the fire is not to be used for an hour or so drop the lip at the upper front part of the stove, or lift the lid, either of which allows the cold air to pass over the surface, preventing rapid combustion.

How to Waste and How to Save Fuel

Many housewives waste a great amount of coal by leaving the drafts open too long before actual cooking begins. When the coal begins to look a little white or grayish on top the heat has been exhausted, but if the drafts are closed as soon as the coal is heated and a little blue flame is playing all over the top the heat is held almost stationary for some time. Never fill the coal-box to the top, as it is a great waste of fuel, owing to the fact that it takes a long time to kindle such a mass of coal and the heat is hard to utilize. Notice how the fireman on an engine shovels in just a little coal at a time. He does not have a big fire, but it is always strong and bright. Practice has taught him that a uniform fire gives the greatest amount of heat for a given amount of fuel. Oven heat is not increased by the greater depth of fuel, though this idea seems to be quite prevalent; in fact, if the coal is higher than the fire-box the draft is greatly diminished, and in this way the fuel is only wasted. Then, too, such a mass of fire near the lids warps and cracks them, and burns the food and cooking-utensils. Very few things cooked on top of the stove require an intense heat. Water, no matter how fast it is boiling, is only at 212° Fahrenheit; the vegetables do not have to be boiled at a gallop to be properly cooked. Stews and thick materials are best cooked over

a slow fire, at a great saving of food and fuel. Meat is much better cooked ten degrees below the boiling-point, so that it is not at all necessary to have the top of the stove red hot. This kind of a top usually indicates a cold oven, as it has been produced by the direct draft up the chimney being left open too long, causing a rapid combustion and waste of coal. If this had been closed every particle of heat resulting from the burning of the fuel would have passed around the oven on its way to the pipe, thereby heating it with the same amount of coal it took to heat the top.

Not only by studying thoroughly the manipulation of the drafts can the housewife economize on coal; she can do much by planning her cooking so the stove can be utilized for more than one thing at a time. For instance, on Monday, which in most households is wash-day, a constant fire is needed so the oven can be utilized for dinner and supper without disturbing the top of the stove. Have roasted meats and baked potatoes, baked puddings or pies; while on ironing-day cakes, buns and other food rich in sugars should be baked as soon as possible after the fire is fixed in the morning, as they require a slow oven; then the bread, which should be raising while this baking is going on, can go in the oven, which by this time will have reached a good, steady heat. The ironing is often dragged out, and more coal thereby used, by having to push aside the irons while vegetables are cooking for dinner on the top of the stove. If double or triple saucepans are used this can be avoided. Those which are semi-circular in shape (these come separate and joined) allow the cooking of two foods over a single opening; others which are somewhat triangular in outline admit of the cooking of three foods simultaneously. These saucepans can be used when either coal-oil, alcohol or gas is the cooking fuel. Another saver when these fuels are used is a heat-distributor made of cast iron with lids similar to those of an ordinary range. It fits down on the stove and is so arranged as to assist in the distribution of heat over the entire surface. Usually with one burner lighted boiling can be done over two lids, simmering on one, and food will keep warm on the other.

Let the Fireless Cooker Help

If one is the possessor of a fireless cooker many dollars can be saved during the year, but much common sense in the woman behind the cooker is necessary in order to do this. Too many feel that they can put hastily and poorly prepared dishes in the cooker and they will emerge culinary triumphs. They are nothing but failures, and the fuel used in the beginning is, of course, wasted. No one should try to do things in a cooker which require a maintained or increasing heat, and any food which needs the evaporation of the water in or about it cannot be as well cooked in a fireless cooker as elsewhere. This means of cooking does its best work where slow cooking with moderate heat is necessary, but when the plates are heated for browning or for processes which are short in the ordinary oven no fuel is saved.

Much waste is occasioned often by burning the wrong kind of coal. Anthracite is nearly a solid carbon and is most easily managed and arranged to "keep." The small chestnut is more economical than either the large chestnut or stove, for the reason that the large air-passages that necessarily come from large pieces of coal cause extra draft and more rapid combustion. All hard coal should be carefully sifted after being burned the first time, for what is saved makes splendid material for banking the fire in the afternoon. Even if one is dependent upon the stove for heating purposes, after the house has been warmed through in the morning a slow fire of cinders is quite enough to keep it comfortable until additional fuel is required to prepare a meal. Though soft coal is lower in price, it is never economical to buy it, as one must be constantly putting on and looking after it. What applies to soft coal also applies to wood, unless quantities of it are on one's own place.

What Kind of Coal Shall We Use?

In all kinds of coal there is a dangerous gas, produced by imperfect combustion, called by some "coal-gas," but known technically as carbon monoxide. If you chill coal too much or give it too little draft this dangerous gas will be formed and thrown out into the room. The draft should be changed instantly, either by replacing lids or closing the lip of the stove, when gas is noticed.

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Look for the Red Ball

—the "Ball-Band" sign. It's in the windows of 45,000 honest dealers and it's on the goods—if the Red Ball is not on the goods you are not getting "Ball-Band" Quality.

The "Ball-Band" Coon Tail Knit Boot is knit, not felt, insuring the utmost wear and service. The patented snow excluder keeps out snow, dirt, grain and chaff and keeps the ankles warm. Heavy gum overs to fit. This boot is completely shrunk—it can be washed when dirty—it simply won't shrink any more.

"Ball-Band" Arctics are made with one, two and four buckles. The Red Ball is on the sole. Look for it. The tops are best cashmerette and the linings we make ourselves from the same kind of wool that goes into the Coon Tail Knit Boot.



From HERE to HERE
The knit boot overlaps the rubber

If your dealer is not one of the 45,000 "Ball-Band" dealers, write to us. We'll see that you are supplied. Write anyway for free illustrated booklet describing "Ball-Band" Footwear.

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FARM AND FIRESIDE

EVERY OTHER WEEK THE NATIONAL FARM PAPER

SATURDAY, DECEMBER 6, 1913

5 CENTS A COPY



Wealth—Do you see it in the picture?

LOOK FOR THESE GOOD THINGS THAT ARE COMING

Starting with Poultry

Everyone will be interested in this account, either because he has started or because he has not. But it takes a man of experience to point to errors made. And, of course, the man of experience, if he has been successful, can tell the other side too. That you may expect to read about.

If You Have Never Carried Mail

You have received some, and so you will read with interest the story of a servant of the rural free delivery.

Ask the Soil

That's what one man did, and he got an answer. The only reason the rest of us don't get an answer is because we don't ask. See if that isn't true.

Good Words for the Goat

Why not give the goat credit for what he is worth? He has been condemned and ignored—but usually the fault lies with the fault-finder, not with the goat. So it would seem after reading this story by a friend of his.

The Best Farm Churn

H. F. Judkins, the Connecticut dairy expert, gives his preference. It will take good evidence to the contrary to prove that his favor is misplaced.

What Doctor Alexander Says

is right. That is what makes his answers to questions sent FARM AND FIRESIDE worth reading. They are appearing almost every issue.

Your Specialty

What is it? Agriculture is demanding your services as a specialist. Some there are who have won in particular lines. Everyone will be interested in reading about a boy that made tree surgery his specialty.

Going to Build?

We have coming several descriptions of various farm buildings—actual successes. Not like the general run, but original. They'll give you hints. Not gentleman farmer's buildings, but the kind you can afford.

Santa Claus in the Chimney

We have not forgotten it is Christmas. With some of the fine carols of earlier centuries we shall bid you be merry. A delicate love story of a Puritan Christmas is full of the fragrance of evergreens and the Yule log. From the snow-shrouded steeple of a country church will ring out the double chimes of Christmas and wedding bells.

It is hard to find out anything new about Santa Claus, for he is such a sociable old saint he seldom conceals anything he has done; but Harry Whittier Frees, special historian of Doll and Fairy Land, has unearthed a startling anecdote never known before, regarding one of his adventures.

Your Problems are Ours

And so if you have any questions on subjects such as are indicated below or on any other subject, write us. We are always glad to talk with FARM AND FIRESIDE folks.

1. Balancing rations and the economic feeding of farm stock—dairy cows, beef cattle, calves, horses, colts, sheep, swine, poultry.

2. Bringing the producer and consumer of feeds and seeds together.

3. Stock, poultry, and plant breeding.

4. Buying and mixing fertilizers, application of same and of lime; crop rotations; adaptability of land and soils to particular crops; planning and planting orchards, windbreaks, and timber lots; drainage; irrigation.

5. Suggestions on fencing, roofing; plans for farm buildings; furnishing farm homes; planning farm grounds; heating and lighting farm homes; sewage disposal; water supply.

6. Manufacturers of farm machinery, sources of supply, adaptability of implements for particular purposes.

7. The marketing of produce through reliable commission concerns, special markets, and suggestions on demand and supply; sources of supply of containers and packages.

8. The organization of co-operative farm organizations—farm clubs, unions, granges, rural improvement.

WITH THE EDITOR

What the Meat-Packers Said

The American Meat-Packers' Convention met in Chicago and told the American farmers what it wants them to do. In order that the message may reach all the farmers who read this paper, and so that there may be no misunderstanding, I will summarize the suggestions of the meat-packers to the farmers.

We are each of us to raise at least two beef steers a year. It may not pay, but we must do it to make up at the packing plants for the shortage caused by the falling off of range cattle.

This is the main thing for us to do right now, but there are some others. The remaining ranges must be cut up into farms. New England must grow beef cattle. The southern farmers must grow more corn and cattle, and less cotton. We must stop the "unthinking slaughter of calves, especially heifers."

Some of this is good advice too; but how is the small southern farmer to get the money to go into cattle? Will the American meat-packers finance him? And supposing that the southern farmer lives in a tick-infested region, shall he plunge in, or wait for the cleaning out of the ticks?

And how many New England farmers are in position to try out the untried business of beef production, even among what the meat-packers refer to as "the bountiful springs and prevailing shade of New England"? Will the packers risk their money in financing some of the owners of the springs and shade?

The American meat-packing house situation . . . is in a condition more precarious than at any time in our history. . . . The farmers are not furnishing nearly a sufficient number of animals to keep the packing-houses in operation on anything like full time and this results in heavy losses, owing to lack of volume of business.

These statements are from the report of the packers' executive committee. They are true statements I suppose, but the condition is largely of the packers' own making. Uncle Henry Wallace, in commenting on this, says:

It is not likely that the farmers would consider themselves particularly obliged to grow enough cattle irrespective of profits so as to keep the packing-houses running at full capacity, and thus enable the packers to make a maximum of profit. They have not yet forgotten 1908, when the banks of the West were full of packers' paper, which, it was claimed, did not exceed in value the meats in cold storage and could have been paid off by simply stopping the purchase of cattle for six weeks. What they did was to cut down their purchases for three months—and every man that had cattle or hogs to sell at that time had to take about two thirds of their value until the debts of the packers were paid. Many of the farmers still remember this and will not soon forget it.

That is Why Cattle are Scarce

The present cattle scarcity began right there. The packers had a perfect legal right to refuse to support the market and rob the farmers of their stock by paying them only two thirds of its value. They had a perfect legal right, unfortunately, to pay their notes, which gorged every Mid-West bank which would buy them, out of the farmers' cattle instead of lowering the market for the meats they had in cold storage by throwing the meats on the market. They had the power to choose between buying the farmers' cattle low, or selling their stored meats low. They chose to sacrifice the cattle business rather than the meat business—and the present situation is the result.

If they had supported the cattle business then they would not have to mourn it now.

The cattle business cannot be changed in a year. Men engaged in it stay in, and when they go out of it they stay out. The men who lost money in 1908 are many of them out of it yet—and they are sorely missed.

On this question of the beef-supply the packers are experts; but there are other experts. Secretary Houston and Assistant Secretary Galloway have a corps of experts working on the problem, and these are trying to look at both sides of the question. On one thing only they agree with the packers—as do most people who give the matter any thought. This is that the beef famine would be cured if the small farmer would grow beef cattle. By "small farmer" is meant the operator of the medium-sized farm in New England, the Middle Atlantic States, the South and the Mid-West. "There is abundant opportunity," says Assistant Secretary Galloway, "to increase the number of cattle raised annually, and the department is ready to assist."

But the method by which it stands ready to assist will scarcely please the packers. It shows, however, that the Washington department has its finger on the sore spot in the cattle business—the markets. And it proposes the establishment of municipal slaughter-houses by the smaller cities all over the country to compete with the packing-houses.

We Hope the Remedy Proves Effective

This sounds something like a remedy. If there had been such municipal slaughtering, packing and storage houses in 1908, the packers would not have been able to get cattle for two thirds of their value to pay their notes with, when the banks refused to renew their paper in the midst of a panic. Here is what Assistant Secretary Galloway says in a newspaper interview:

There is one thing upon which the solution of the whole problem depends. That is the establishment of abattoirs by the smaller municipalities of the country, to which the farmer can go and dispose of his live stock, have it slaughtered, and have it held for favorable markets. Their establishment will give the farmer a competitive market in which to dispose of his cattle. This alone will be an incentive for the production of cattle.

Can Secretary Houston and his helpers put this thing over? If they can they will have done more for the cattle business than all the other administrations combined—though the Wilson people certainly have helped on the cattle-tick.

I can see many lions in the path; and here's hoping that the Secretary will prove a lion-killer.

Robert L. Smith

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FARM AND FIRESIDE is published every other Saturday. Copy for advertisements must be received three weeks in advance of publication date. \$2.50 per agate line for both editions; \$1.25 per agate line for the eastern or western edition singly. Eight words to the line, fourteen lines to the inch. Width of columns 24 inches, length of columns two hundred lines. 3% discount for cash with order. Three lines is smallest space accepted.



PUBLISHED BY
THE CROWELL PUBLISHING COMPANY
SPRINGFIELD, OHIO

Branch Offices: 381 Fourth Avenue, New York City; Tribune Building, Chicago, Illinois

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Entered at the Post-Office at Springfield, Ohio, as Second-Class Mail Matter

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SUBSCRIPTION PRICE

One Year (26 numbers) 50 cents
Canadian, 1 Year . . . 75 cents
Single Copies, Each . . . 5 cents

Subscriptions and all editorial letters should be sent to the offices at Springfield, Ohio, and letters for the Editor should be marked "Editor."

Silver, when sent through the mails, should be carefully wrapped in cloth or strong paper so as not to wear a hole through the envelope.

Vol. XXXVII. No. 5

Springfield, Ohio, December 6, 1913

PUBLISHED
BI-WEEKLY

A Pennsylvania man claims to be the discoverer of the fly that stings the San José scale. He wants credit for the discovery. As a matter of fact, the best orchardists have known for two or three years that "something was after the scale." Professor Surface is entitled to the credit of bringing the parasite to the attention of the world. Just who saw it first is unimportant.

Girls Farm Intensively

THERE is a lesson in the interesting work of the Girls' Canning Clubs of the Southern States, working under the auspices of the United States Department of Agriculture.

About twenty-five thousand girls have been enrolled in these clubs, each cultivating a tenth of an acre of vegetables and canning the product. Tomatoes constitute the staple crop, but beans, corn, and other fruits and vegetables were handled by some of the girls.

Bessie Starkey, a Virginia girl, obtained 5,928 pounds of tomatoes from her tenth of an acre and made the best record. Many of the girls have made records of more than a hundred dollars in profit from these little patches.

Here is a hint for those women and girls who want pin-money or seek to add to the family income. Here is a powerful suggestion to country schools. An acre of land adjacent to the schoolhouse will furnish room for ten girls, on which to make money and demonstrate the principles of both domestic economy and agriculture—and there is no reason why the boys should not compete.

Fifteen girls will visit Washington to receive the congratulations of the officials of the U. S. D. A. about the time this is published. They will have fine trips and plenty of fun. It will be a great thing for them as prize-winners from their several States. But the important thing about the matter is that each of the twenty-five thousand will be entitled to the credit of having taught the world a lesson. That lesson is one of self-help, and the intensive and profitable use of our common heritage—the land.

Our Boys

AS THIS is written our warships are hovering off both coasts of Mexico, and our regular soldiers are engaged in war drills on the border. There has been a good deal of talk about the "duty" of the United States to intervene in Mexico. The people given to this have the habit of using such phrases as "bringing the Greasers to time," "straightening Mexico out," "maintaining the honor and dignity of the flag," and the like. President Wilson has been accused of school-teacherishness in failing to do these violent things. But the people are with Wilson. The elections which took place in the midst of a Mexican crisis show approval of his policy. Investors in Mexican property there are who loudly demand that we resort to force. They speak of defending the flag, but what they want is the defense of the dollar. Just ordinary people, whose boys, as this is written, are doing the fall plowing, husking the corn, and feeding the stock, cannot see in such demands anything short of a crime against us and our families. For if these people, so full of mouth bravery and pocketbook cowardice, have their way, next year will see these same boys shooting Mexican boys who never did them any harm, and being shot by them. Wilson stands for the boys and their homes rather than for the "enormous interests" of Americans in Mexico. There are things worse than war, but no possible situation in Mexico is.

Personal Loans

WE HAVE become so much interested in the proposed plans for loans on farm mortgages that we are in danger, in all this agitation for rural credits, of forgetting the need of tenant farmers and small farmers for easier money on their personal credit. The man whose farm will not stand anything more in the way of a loan—the settler in the newer regions, the man who is reclaiming and restoring a patch of run-down land, and the tenant farmer generally—is in far more need of a better system of credit than is the man whose farm mortgage would be handled by the rural national banks if some such scheme as the Fletcher Bill is adopted, or by the Government if the ideas of those who agree with Mr. Bathrick of Ohio win the approval of Congress. The man who with no mortgageable farm would like two hundred dollars with which to build a silo, or fifty dollars for a breeding animal, or the money for a car of fertilizer or cotton-seed meal, is being forgotten. And yet the greatest usefulness of the European system of farmers' banks, of which we hear so much, has been found in their furnishing of money in small amounts for proper productive purposes to poor men

headache preparations, cough, cold, and catarrh medicines, soothing sirups and asthma treatments, contain one or more dangerous drugs.

Patent medicines exploited as discoveries and miraculous remedies are in the same class. While the authorities are constantly on the lookout for dangerous drugs sold in violation of the law, general knowledge on the part of purchasers of the injurious nature of these drugs is necessary for self-protection.

Closed Season for Insect-Eating Birds

FEDERAL regulations on migratory birds, that went into effect November 1st, have far and away greater possibilities for the benefit of crop-growers than is yet generally realized. The ultimate advantage that will follow the protecting of some of the game birds may be questioned, but the good that will result from better protection of various insect-eating birds such as the large families of fly-catchers, warblers, swallows, also the garden and field feeding birds—larks, sparrows, thrushes, wrens, and bobolinks—cannot be measured by mere figures. Then there is the humanizing and recreative value of bird companionship that must not be lost sight of. The

boy or girl who learns to make friends with the birds and becomes intimately acquainted with them, seldom becomes an undesirable citizen.

Bulletins



OW could I run my upland farm and keep my little pigs from harm? How could I ever sow or reap if good advice were not so cheap? My Congressman, a native son, now stands in well at Washington, and every month he sends to me a bulletin or two or three. They're gotten out by Uncle Sam, and treat of "How to Sell Spoiled Ham," "The Cheapest Way to Raise Sardines," "New Ways of Cooking Lima Beans," "The Breeding of Antarctic Whales," "What Not to Eat at Public Sales," "The Wart-Hog Industry in France," "How Brown Bears May be Taught to Dance," and sundry other useful things. I hail the mailman when he brings this pile of pamphlets to my door and groans and hastens back for more.

Yet in my daily grind of woe there are some things I want to know that bulletins don't seem to tell. Why, when I buy and when I sell, the other fellow grabs the dough; this is a thing I'd like to know. Oh, Uncle Sam, why don't you print a bulletin with just a hint of why the farmer is the goat, why I must wear my last year's coat while Jones, the big commission man who buys my produce when he can, has country homes beside the sea and doesn't speak to wife and me when speeding in his touring car out where his bathing beaches are?

Please tell us truly, Uncle Sam, why we producers of the ham must be contented with the smoke, while all the meat to other folk who never toil and never spin is handed over. This has been a stumbling-block to Ma and me. We'd like to know how it can be that we who cultivate the soil must take the risk and do the toil as our share of the great world's work, while profits go to those who shirk. Why do I wear my uncouth jeans while those who sell me tin machines which cost a fortune to repair are always dressed so debonair and smile so sweetly at my clothes the while they sell me misfit hose?

Now, Uncle Sam, pray don't be vexed, but answer these things in your next, and when this bulletin is done just send us one from Washington.

Chas. B. Driscoll

on their personal credit and integrity. To help those who are already strongest and leave the weak to help themselves is to make the rich richer and the poor poorer. And we have had too much of that already.

The Mask of Technical Terms

EVERYONE should for his own protection be familiar with the names of the dangerous, habit-forming, and harmful drugs that are used either directly as drugs or as ingredients in patent medicines. The drugs which the pure-food department of the Department of Agriculture require to be declared on the label are: Alcohol, morphine, opium, cocaine, heroin, alpha and beta eucaine, chloroform, cannabiss indica, chloral hydrate, acetanilide, and all derivatives and preparations of these drugs. Among the more common of the "derivatives" are: Ether, paregoric, laudanum, codeine, and acetphenetidine.

The use of technical terms not generally understood is one of the most common methods employed to avoid rousing the suspicion of the purchaser. Nearly all

even begun, if it makes good. That's the only "if" in the whole matter—if it makes good. If the various leagues, associations, corporations, and local associations for the betterment of farming are able to show in five years from now that the work pays the farmer, that the farmers working according to their suggestions are actually more successful than other farmers, then the whole farming population will insist on going to school as they go to the fields.

In such a revolution in matters agricultural, the agricultural colleges will need the best thought of the state governments, and the sanest sort of management, or they will be lost in the rush they have started and are now leading. If, on the other hand, it turns out that even under the best instruction farming still remains the same steady, slow, close-fitting old business, that the results of the better methods are so small as not to be very apparent, then the movement to carry salvation to the farmer will wane, and the professors who have left the agricultural colleges for commercial life will go back and the deans will be relieved of the fear that their dearest professors are likely to be kidnapped overnight.

Hopkins and Ten Eyck

D. R. CYRIL G. HOPKINS of the Illinois College of Agriculture has taken a year's leave of absence, during which time he will give a company engaged in development work in the South the benefit of his almost unequaled equipment in soil management.

Prof. A. M. Ten Eyck, formerly of the Kansas Experiment Station staff and later engaged in the extension work of the Iowa State College, has become a county farm adviser for Winnebago County, Illinois.

The agricultural colleges face a crisis. When corn-belt counties are willing to pay \$4,000 a year to practical scientific men like Ten Eyck—and we understand that some counties are paying that salary or more—the field of scientific agricultural work becomes suddenly so expanded that nobody knows where the trained men are coming from to carry it on. It is so great a war that our force of officers becomes too small for the enormous armies of volunteers.

And the campaign for skilled agricultural demonstration and instruction has not



Guaranteeing the Guernsey

How the Business Rating of Registered Stock is Established and Maintained

By D. S. Burch, Associate Editor

DID you ever stop to think what a wonderful thing our system of numbers is, though a still more wonderful thing is the human mind that can organize figures and make them talk to us. Take the figures of the census for example, or the figures of the Government crop reports. Speculators almost fight each other to get the figures first. They have studied the language of figures and understand them at a glance. And in a business way they take advantage of people who haven't taken the pains to learn number-talk.

We cannot all be experts in interpreting figures but we can become more competent than many of us are by just taking a greater interest in the figures, and when we get to know them better they'll be among our best friends and advisers.

Not many decades ago breeders of dairy cattle in this country conceived the idea of forming clubs and appointing a secretary for each club to keep such records as the members desired. From this simple idea, a most excellent one too, our dairy-cattle clubs have evolved. Take for instance the American Guernsey Cattle Club with headquarters at Peterboro, New Hampshire. Its secretary, William H. Caldwell, assembles the figures which are constantly being enlisted by the members, into squads, companies, regiments, and armies to protect the interest of pure-bred Guernsey cattle.

Twenty years ago his office was merely a desk in his home. To-day it occupies a two-story building and requires the services of twenty expert clerks, book-keepers, and stenographers. His work is chiefly:

1. Registering pure-bred Guernsey cattle.
2. Maintaining an advanced register of animals that have established satisfactory butterfat records.
3. General organization and publicity work.

Registering an animal means the filing with the secretary of a complete description of its pedigree, the color markings, name, and other information which will distinguish it from all other animals.

The register is of great value in buying or selling animals. You do not have to depend on a breeder's

assurances for its pedigree, as you can verify his claims. The records of birth, description, and ownership of Guernseys are as much a protection to a buyer as an abstract of title to a piece of real estate. The chief numerical work is in keeping the advanced register. Doctor Bishop, who has charge of this, believes that if a thing is worth doing at all it is worth doing well. He will point out to you how every figure is challenged and must give a good account of itself before it can enter the records.

Registered cows are admitted to the advanced register after they have produced the required amount of butterfat, which is 250.5 pounds annually for a two-year-old, and one tenth of a pound of butterfat a day more for every day after two years up to five years of age, when the required amount will have reached 360 pounds, which is the amount required of all cows five years old or over.

When a breeder wishes to have one or more of his animals tested for advanced registry, he makes application to the Guernsey Cattle Club and a tester whose qualifications are guaranteed by the professor of dairying of the experiment station of the state in which the breeder lives is assigned to the work. The breeder is not allowed to select the tester nor is he permitted to pay him. The tester is paid by the club through the experiment station and the breeder pays the club. Thus the tester is entirely free from any financial strings.

Even the Rations Receive Publicity

All reports of tests must be approved by the professor of dairying before the figures are considered at all. Then if, on careful scrutinizing, any figures appear unusual or differ greatly from the general average for thousands of Guernseys of the same age, a retest is ordered and another tester very often assigned to the work. All of his additions, calculations, and averages are verified, and if the cow comes up to the standard she is considered eligible to the advanced register. Then enough copies of the record are made to send to each owner, and one to each of the three

members of the executive committee. All of these copies must be returned O. K'd before a certificate is granted admitting the cow to the advanced register. The milk record and the rations fed the cow are then published, so that full publicity is given to the animal's performance.

On May 1, 1913, 2,313 cows were in the advanced register. Of these, 543 had given over five hundred pounds of butterfat in a year, and 3 over nine hundred pounds.

One of the main tasks on the secretary's shoulders is the publication of the production records and pedigrees. In the case of bulls the record of the mother is given. So if a breeder wants to buy a bull of a certain strain he looks through the records which are furnished him by the club. Half-way down the page he may see the name of an animal which he knows to be a good individual and which took first prize at the state fair last year, and whose mother had a record of 358 pounds of butterfat a year. A little farther down he sees one whose mother has a 470-pound record, and on the next page is another bull of the same strain whose mother produced 684 pounds of butterfat a year. He can rely on the figures absolutely, and the higher they are the greater is the probability that the female offspring of the bull will be heavy milk and butterfat producers. His final selection may depend on the price he is willing to pay, but whatever bull he chooses he knows just what he is getting.

The record of a cow's milk or butterfat production is her business rating in the commercial world, and her sons and younger daughters are to a large extent credited with her rating. If the rating is to be worth anything to us, first the figures must be accurate beyond a doubt, and second, we must be able to read them intelligently. These things that breeders of pure breeds are doing on a large scale we can all do on a small scale individually or by communities, but our records must, in their limited extent, be as well kept as those of the cattle clubs, so they will command respect anywhere we want to produce them.

System in Picking and Growing Raspberries

By D. A. McComb

WE HAVE on our farm three acres of raspberries. The past season was the second year for one acre and the third year for two acres, so we had a large crop to care for, and had a good chance to try out a system that, so far as we know, is original with us. Since it proved a perfect success, and because of its simplicity, you will be interested in how we handled thirty-two pickers without confusion.

I will begin with the carrier. Make them in the winter or on rainy days. Take common plastering

lath and cut seven pieces 18 inches long, two pieces 11 inches long and two pieces 6 inches long. Set the two 11-inch pieces (A A) on edge, and with lath nails fasten one of the 18-inch strips to each end, like B B. Nail four of the 18-inch pieces on for a bottom, putting the two middle ones near together and then dividing the space on each side of the middle and placing the other two about the middle of the spaces. This makes a bottom to fit the quart boxes. Now nail the 6-inch strips upright, one at each end (C C). The last 18-inch strip will fit between them. Nail it and you have a carrier for six quart boxes.

Make and have ready as many as you expect to have pickers. For illustration we will say you need ten. Make ten carriers, and with a pencil number them from 1 to 10. Put the number on each end of the handle where it can be easily seen.

Then buy a hundred or more plain cards, 2 x 4 inches—no printing needed—or you can save expense by cutting them out of pasteboard. Mark ten of them, to correspond with the carriers, with plain number on each side of the card. Buy a conductor's punch that cuts a star or cross or some figure that can't be easily imitated with a knife or nail. Put the cards into groups of three or four and keep each group in a quart box. You can find them more quickly. Keep the punch in your pocket.

Make Frequent Inspections

When the pickers come, give to each a carrier full of boxes and start them in twos, beginning on one side of the patch, and put one on each side of the row, with instructions to pick clean and fill the boxes a little rounding full. If you have many pickers you will be busy punching and crating, but try to get time enough to walk up and down through the patch a few times during the day. It will pay. This can all be done in a way that will not offend any reasonable helper. When a carrierful comes in, punch the card in groups of six holes. This helps counting in the

evening, as you can count by sixes. These seem like small matters, but when you come to keep a correct record on thirty-two pickers, as I did, every little item of convenience helps.

When we are through for the day I sit down and count up each card and mark on it the amount due and hand the card to the picker. I then get out my money-bag, which has been provided with plenty of small change. As one at a time passes in his card a glance shows his dues, which is handed to him and he passes on for the next one. These cards for the day are put together and a string is tied around them and they are laid away. By adding the card amounts at the end of the season I know exactly how much my picking cost. A new set of cards is used every day.

Good Fruit Helps the Market

If you have a shed or building near the berry patch, have your pickers deliver there, and you can do the crating without fear of rain. I have a 7 x 9 tent that I set up in the patch. As our farm is six miles from our best home market, a town of 15,000, where we sell almost our entire crop to two grocers, we keep a man and wagon on the road all day. We sell nearly all of our crop the same day it is picked. This insures freshness and keeps up the demand. And as our berries, both this year and last, were nearly a week ahead of others in ripening, and were large, we got the top price for nearly all of them. The matter of early ripening and size is an important item. Both years we had sold most of ours before the market was loaded. We cannot account for the earlier ripening unless it is in the trimming and cultivating.

An Excellent Trimming Hook

Our three-acre patch receives occasional attention for ten months, so that it may be in proper condition for a good crop. As soon as the crop is off we cut the old bushes all out and burn them. This has four advantages: it gives all the plant-food that would otherwise go to the old stalk, to the young canes; it gives the new bushes more room to spread, and they grow shorter, stiffer, and bushier; it takes all of the old stiff brush out of the way of the horse for the fall cultivating; and last, if there is any disease among the old brush the fire destroys it and keeps it from spreading to the young plants. We finish cleaning up our patch about the end of July.

The tool we have devised for the summer trimming of old brush can be duplicated by any one. Take a

section from an old mower cutter-bar like A in Fig. 2 and go to a shop where there is an emery wheel. Grind out the section till it looks like B, with the edge on the inside. Take an old broom handle and saw enough off the small end so you can just reach the ground with it without stooping. Saw a slot in the small end deep enough to take in the width of the section. Lay the section on the handle over the slot and make pencil marks



Fig. 3

through the holes, then make gimlet holes to match those in the section. Put the section in its place and rivet it tight but do not split the wood. Nail a strong strap loop on the end of the handle. Now you have the best tool you ever used for raspberry brush. Put on a thick pair of leather gloves and you can handle the brush as easily as willow sprouts.

After cleaning up, we go through both ways with the cultivator, being careful not to get so deep and close as to pull the roots. Later in the fall, if the weeds get a start, we cultivate again. Then we are through until the following spring. About March we clip off all the long sprouts, cutting the bushes back into stubby, bushy little trees. Then we bunch the loose brush with a wooden horse rake like Fig. 3, and fork them out and burn them. When the frost is out we dig the plants if we want any. When the weeds begin to grow we cultivate the same as in the cornfield. Do not forget that the horse has feeling. Get heavy awning canvas, 40 x 48 inches, and make a combination suit or apron like Fig. 4. Hem all the edges. Make it according to the dimensions and it will fit any horse. Tie the string A around the collar, strings D D to the hames, and strings B B back to the harness on each side. Now bring the parts C C together and tie the strings. This apron is worth good care. Keep it where it is safe.

About June, when the new canes show above the old bushes, clip them off. Do this three times before berry time, and do the last cultivating about three weeks before berry time. All the fertilizing we have found necessary is to manure the patch well before planting, and then, with the constant care as described, it is good for at least five years. By that time we will have another patch prepared in the same careful way and have it coming in about the same time that the old one is going out.

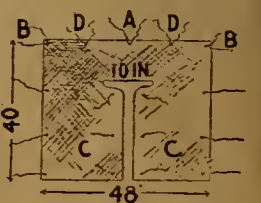


Fig. 4

Eight Years of Dry Farming

Methods That Have Been Successful. What the Future Holds for the Semi-Arid Sections

By S. M. Konkel

DRY farming and socialism are alike in the variousness of the interpretations put upon them. Every man has an understanding of his own and an interpretation of his own. I am not writing this to expound the best methods of dry farming, nor to dilate on the scientific methods that have been promulgated, but to tell what I have found out about the West by observation and practical application as a farming country.

As to the exact method of dry farming, it isn't a thing that can be theoretically set forth and reliably followed, nor a thing that can be determined in short order by practical tests. It's a growth, an evolution, passing gradually through the infantile and juvenile stages to maturity, and is consequently a thing that our children will know more about than the best of us do now.

I will say briefly that dry farming isn't cropping every other year by the summer-tillage method, nor cropping without any rain, nor by any one set method, but cropping to the best of our means and understanding to get the best results possible with the rain that we have.

I am in the corner county of southeastern Colorado, and am consequently in the heart of the dry belt. I helped to settle this country twenty-five years ago, though I was not then engaged in farming, and left under the solemn conviction that the country was everlastingly doomed; that God made it for ruminants to browse over by day and carnivorous beasts to roam and howl in by night; and about nineteen twentieths of the forlorn population felt likewise and faced about and made tracks for a land of higher grass and taller timber. After fourteen years, during which time I thought of this country only as one having the stamp of the seal of doom upon it, I came back to recoup some reverses I had sustained elsewhere. Of course I didn't come back to farm. I thought I could manage to get a start in cattle, and in cattle there is money. When I got back I found there was practically nothing known of the possibilities of farming here. It had been relegated to a secondary place by the few settlers that stayed with the country, and no efforts made in that direction except to raise a little fodder for their cattle.

What was done in that direction was a kind of horseback farming. But I found that at least the things they were attempting to raise were different. In the old days there was nothing but corn, and all the farming was on the hard land. Now for their roughage they were growing sorghum and milo maize and a few were growing broom corn.

As an indication of the farming that was done prior to that time, there was an old thrashing machine over the line in Kansas that did all the thrashing for the counties round about. There was a self-binder in this neighborhood that would sometimes drive twenty miles to do a little cutting for some man. There was one riding lister in a radius of twenty miles. There were no cultivators, the cultivation being done with the knife weeder and the harrow. In a word, the walking lister, the knife weeder and harrow, and a sled for cutting up their fodder constituted the farming equipment of the time. Now every man has his riding lister, two-row cultivators are everywhere, sulkies are common, disk harrows are in evidence, one-row binders, which had never been seen, are plentiful, each neighborhood has one or more grain binders; grain headers are here and there, and thrashing machines have loomed up in the different settlements; and, as an evidence of modernization, the telephone, the motorcycle, and the automobile have come.

Land Prices Twenty Years Ago

The difference that is put on the value of land now and ten years ago is an indication of the transformation of the country. Twenty years ago it was selling at from twenty-five to fifty dollars a quarter, ten years ago at from fifty to one hundred dollars a quarter, and to-day at about one thousand dollars a quarter. The difference in the valuation of land now and then isn't a mere matter of the new settlement that has since come in, but the general prevailing contentment and prosperity of those who have been here long enough to get ahead.

After having been here for some time I began to wonder if something might not be done in the way of farming; and about the same time Campbell came out with his magazine articles on the subject of "dry farming," and his pamphlets soon followed on the same subject. Macaroni wheat was just then having an inning, barley took its place in the new order of things, spelt came in for its share of attention, and Kherson and Red Texas oats lined up in the procession; and to all these the new order of things here, agriculturally, is indebted. Some of these things have since been dropped from the program and others are declining in popularity, but the impetus given to farming by these contributing influences has taken the country out of the domain of conjecture, doubt, and uncertainty as to whether it is agricultural or whether it

isn't. No one stops any more to ask someone else what he thinks about it. The question is settled. It is an agricultural country of a certain dependable class, and from this recently acquired elevation there will be no recession to materially impede its onward course.

I have been here eight years and have farmed seven, and during this time there has not been a single failure in making a good crop in my locality where any kind of intelligent farming was done. I have a neighbor who has farmed here for twelve years and has come out on top at the end of every year with a good crop.

We Get Big Results Even Without Much Rain

You will notice that the above is a modified statement. I have known other localities during this time that under the farming in vogue raised only fodder, and still others where there was not rain to make fodder worth cutting. The kind of land in such cases has had much to do with it, and the kind of farming very often had a great deal more to do with it than either the season or the land. With any kind of intelligent farming, on good land, and particularly on our sandy loams, some moisture will be stored away in



It's a matter of moisture conservation. Here the tractor is drawing two double-disk harrows while pushing the harvester

the cultivation of one-row stuff for the year following—a little more each year than the year previous, up to a certain point, so that a failure of fodder is out of the question even when rain for the season is wanting.

The facts about rain are that we think no more about it than our brothers away back in the rain belt. It may not rain for two, three, four, or even six weeks, but our stuff keeps right on, so while we are wondering if it is ever going to rain again we still have a feeling that at the end of the season we will have something to show for our summer's toil.

Of our methods of farming, the tendency is towards a uniformity, and the uniformity is in the right direction. What one doesn't find out another finds out for him, and he profits by it. The tendency is towards deepness for a moisture-holding bed, and a moisture retentive condition of the soil. Listing is pre-eminently the moisture-bed method of planting. It wants to be done deep, and on hard land it wants to be done once—twice would be better—before planting. If I were on hard land I would list in the fall, then in early spring as deeply as six horses could pull the lister—of course always breaking the middles—and then again in planting. We ought to watch our chances to do our back listing after a heavy rain to

bury the moisture, and the first inward cultivation should be done likewise. If we can succeed in burying two or more heavy rains we will have grain, and if we can then have one good rain at graining time we will have a big crop.

Our problem for success out here is extensive farming, as against intensive farming in the back-east country. A man here who would try the forty-acre intensive plan would starve to death. What is wanted here are fast-working tools. A proper one-man equipment is a two-row lister, a two-row cultivator, a one-row binder, a thrashing machine and a baler, a broom-corn seeder, and of course secondary tools in proportion. One man last year with such an equipment raised five thousand bushels of milo maize and thirty tons of broom corn, with no help except in harvesting. Such an equipment calls for six or more horses. This is the proper equipment. A man needs at least four good horses, a good lister, a two-row cultivator, and a one-row binder to make a success, and if he hasn't these the problem he has to solve is to get them; and about one hundred and sixty acres is what he wants to cultivate. After the stuff is up we want to get over it three times, the first time throwing the dirt out, the second time throwing it in, and the third time completely leveling the ground.

Of course farming here wants to be complemented with the necessary stock. A man needs not less than three hundred and twenty acres, and a dozen good mares, twenty good cows, ten to twenty good hogs to fatten, and around three hundred hens on the roost in the fall.

I will add that less than half the work here will keep the soil in a better receptive condition than back in the rain belt. This is partly from the nature of our soils, and partly from the fact that we don't have the enormous rainfall to pack it down. For this reason even the work that we do is easier—the necessary work for the same results. It is this that gives to extensive farming here its practicability. But the Eastern man wants to take this with a grain of allowance, and he wants to think twice before casting his anchor this way. It's very few of our people who solely by farming are rolling in clover—they've been busy up to this time learning the country's requirements. The Eastern man who comes here has the up-hill job of his life. The trouble is he knows too much about the farming business, as he finds out after he has been here a few years. Our farming here is a thing that has to be learned, and a back-east knowledge on the subject is not much help.

Our standard crops are sorghum, milo maize, and broom corn. Other non-saccharine caues are raised, but these are our "bankables." The small grains have been dropping out of favor. I don't think they will ever pay on a large scale except by summer tillage, and how they would thus pay we have only the word of those in other parts; but they will probably always be grown on a small scale as a side line. Indian corn is growing more and more in favor on our sandy soils. Alfalfa, too, is coming to her own. The Cashaw and Japanese pie pumpkins do well always. Turnips can be grown in paying quantities by summer tillage up to the time of sowing. Potatoes are not a sure crop except by the summer-tillage method.

Orchards can be grown by proper tillage, but in fruit-bearing time require to be irrigated. All shrub-berries do well, and the grape particularly never fails if given the proper attention.

Time Will Tell the Story

This will give the Easterner an idea of what is going on out here, and what he may expect if ever he sets foot "on our shores."

I want to close this with a somewhat sanguine anticipation of the country's future that has not loomed up as yet in the mental horizon of even our own people. It is my prediction that inside of a hundred years, probably inside of fifty, this great American desert will have a population more dense than any purely agricultural territory in the United States. We have a soil that is rich and deep, and we have a climate that for health and happiness and agreeableness can't be excelled between the two oceans. It is irrigation that will do the rest. It is known that enough water runs off and away from these lands to irrigate every foot of tillable land in it. The impounding of this water has commenced—has been going on now for some years, and it will keep going on until what falls here and comes down here from the mountains and foothills will be held and made use of here, as and when wanted. Artesian water is also going to be a factor. We now have some of these wells that afford water for from a quarter to a section of land. Time will develop the boundaries of these artesian belts over the entire half-rainless region, and the completion of the two systems of irrigation will witness the evolution of farming from the extensive to the intensive, a more intense intensive than the half-flooded, half-droughty East has ever been able to put into practice. It is then that the population of this irrigated territory is going to be a factor in the affairs of the nation.



Disking behind the binders forms the earth mulch so much needed in saving the moisture present in the soil. The mulch "keeps the sun away," and the hot winds too



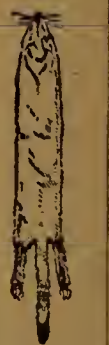
Muskrat



'Possum



Civet-Cat



Ermine



Skunk



Coon

"My Best Trapping Trick"

MUSKRATS are not hard to trap. Here are ten sets, each the best under conditions described.

1. Place a No. 1 trap in water two or three inches deep, about a foot from the bank. Stick the large end of a long stick in bank, so that the other end where the bait is placed is about a foot and a half above the trap and exactly above the pan of trap. Use apple, carrot or flesh of muskrat for bait. When the muskrat jumps to get the bait he gets caught by the hind leg and cannot get away as easily as if caught by front leg.

2. Find the den of a muskrat along bank of stream. Place a No. 1 trap in entrance to den, and stake chain of trap in deep water so the muskrat will drown and not gnaw out. Leave surroundings as natural as possible.

3. Where there are plenty of muskrats they may be caught in this manner: take a board about one foot wide and twelve feet long, place five or six traps on same, and fasten them well; then fasten board by a wire to a tree or stump, and let the board float. They climb upon the board and get caught in traps. If water is deep they will generally dive into it and drown themselves.

4. Find a muskrat's slide along the bank of a stream. Place a trap at bottom of slide about three inches deep in water.

5. In winter, when streams are frozen over, muskrat paths may be found under the ice. Chop a hole in ice and set traps in path every little way.

6. Find a log which crosses a stream and is under water. Cut a notch in middle of log large enough to set trap in. Place trap in notch, and fasten chain on under side of log. This set may catch either a muskrat or mink.

7. Secure three flat stones and make a three-sided pen. Leave the fourth side open, placing trap in middle of fourth side. Place an apple or flesh of muskrat in back of pen. Stake far out in the stream so muskrat will drown.

8. Find where a trail leads into a brook. Place a No. 1 trap at entrance, put a little fine grass over trap, and fasten well.

9. Make a figure-four deadfall, putting a large stone under figure four and a large one on top. Place bait on end of straight stick.

10. Fasten piece of apple or flesh of muskrat to steep bank. Place trap in water under the bait. Fasten well in deep water.

G. W. SIMS.

A 'Coon Set, Simple and Successful—One bright autumn morning as I was going to my traps I saw 'coon tracks in my path, and resolved to catch "Mr. Ringtail." I set a fox trap and placed it in the path, then covered it completely with fine dust from the highway, so no one could tell that a trap was hidden there. Then I fastened the chain to a small bush and laid a stick the size of my wrist across the path about six inches from the trap, so "Mr. Ringtail" would jump over it and into the trap or, if coming from the opposite way, would hesitate a moment before jumping and no doubt step into the trap. Next morning there was a full-grown raccoon in the trap, and how guilty he looked as I approached! But it was not long until his fuzzy coat was hanging in the barn.

HARRY W. BURGESS.

Live Shiners as Mink Bait—One fall I had an interesting experience catching a wise old mink. I tried every kind of set I had ever heard of, but the mink would get my bait without getting caught. After a while I dug a hole straight into the river bank about eighteen inches, and a little larger around than a No. 2 trap, and about three inches above water. Then I set my trap in the front of the hole and ran the chain out into the water and staked it. I covered the trap and chain and made it all look as natural as possible; then I baited that hole with something different every night until I had tried everything I thought a mink would eat, but he didn't seem to be hungry,

although he made a call every night. As a last resort I caught three shiners from the river in a minnow trap, then I dug down into the back of the hole until there was about four inches of water, and put the shiners in. That live bait was too much of a temptation for Mr. Mink, and the second night I caught him. He was the largest and smartest mink I ever caught. This is the surest mink set I know of.

HENRY WILKIE.

Use Meat as 'Possum Bait—The 'possum is a night prowler, and usually hides in the thick foliage of the trees in the daytime. He is not cunning, and will eat almost any kind of meat. Use steel trap No. 1½. After finding his den or his haunts, hang a piece of meat or fish on a near-by tree so he can reach it, or if necessary drive a stake in the ground from which to hang the bait.

Cover the trap with grass or old rotten wood, making sure it is directly under

upon grass and vegetable matter. They will average five or six pounds, and I have caught some that weighed over eleven pounds. John Burroughs says "they make a fine pie;" their flesh is better than rabbit. I can find no market for their pelts, but have examined a fine overcoat made of them.

There are noticeable bunches on the fore shoulders which should be cut off before cooking. Catch woodchucks in traps concealed in the fine earth at the mouth of their burrows.

H. O. CHENEY.

Trails That Weasels Will Follow—There were a great many weasels here in Minnesota last year, and the prices were good. Weasels are fond of rabbits, so I take my small rifle, some traps, and start out. As soon as I can kill a rabbit I cut off its head, so it will bleed freely, and trail it along as I go.

When I find a good place to set a trap I fasten the head with a piece of wire to a bush or leaning stick. It should be high enough from the ground so as to make it necessary for the weasel to get on the trap pan when he tries to eat.

Set the trap just beneath and cover with rabbit fur and dead leaves. Then proceed as before, making bloody trails and baiting with heads or whole rabbits. If a weasel does not find the bait directly he will find the trail and follow it to the bait. A weasel knows which way to follow the trail.

W. L. DALLY.

Chicken for Civet-Cat—To trap the civet-cat, make a crate of slats, and in it place a live chicken. Hang the box by a wire or rope from the limb of a tree, about four feet above the ground. Almost directly beneath it place three or four steel traps facing in different directions. Sometimes a catch will be made if the box containing the chicken is placed on the ground, but the animal is likely to succeed in obtaining the bait and making its escape. If possible, the traps should be set from horseback, so that there may be little or no human odor to make the civet-cat wary. This set is also good for coyotes.

OWEN H. O'NEIL.

Bonfire Set for Coyotes—The coyote is one of the slyest and hardest of all fur-bearing animals to trap. He delights in digging up traps, springing them, eating the bait and otherwise disturbing the set without getting caught. His sense of smell is very acute.

The best way to trap him is to build a bonfire over the set after the traps have been properly placed. Throw into the embers some bacon rinds, chicken bones or, better yet, bones of sage-hen or grouse.

The coyote habitually searches about camp-fires for stray bits of meat, and is therefore less wary. The fire obliterates the traces of the set, eliminates the tracks and smell of a human being, and the odor of the burned meat will attract him from a long distance.

He is more likely to walk into the traps thus disguised with the remnants of a camp-fire than any other, unless you have a carcass literally surrounded with traps with a severe winter on and no other carcasses within miles.

W. F. WILCOX.

Rules Learned by Experience—1. In planning a set, make one that will lure more than one kind of fur-bearing animal, so as to make a catch of some kind at each visit to the traps.

2. One trap well set will catch more animals than a dozen carelessly or ignorantly placed.

3. Use sets that are as natural as possible, and leave all surroundings of the trap undisturbed.

4. Bait your trap with whatever food the animal is feeding on at the time you wish to capture it.

5. You must study the animal's habits, and the way his mind works, before you can hope to outwit him successfully or catch Mr. Fur Bearer off his guard.

Awards and Announcements

The first-prize contribution on this page is "Live Shiners as Mink Bait" by Henry Wilkie; second prize, "Bonfire Set for Coyotes" by W. F. Wilcox. Illustrations through courtesy of Funsten Bros. & Co.

The next contest will be devoted to "Humane Methods for Starting Bally Horses." Prizes of \$3.00 and \$2.00 each will be awarded for the first and second best contributions, and \$1.00 will be paid for all others published.

No manuscript will be returned unless special request is made and stamped self-addressed envelope enclosed. Contributions should not exceed 200 words in length, should be addressed "The Horse Editor," and mailed to reach Springfield on or before December 25th.

the bait, so when Mr. Opossum reaches for the bait he will step in the trap and you will have him: "Playing 'possum" will do him no good.

PAUL SCHNELKER.

A Rabbit-Ferret-Skunk Combination—My best method for trapping skunk is with a ferret and a live rabbit. Carry the rabbit to a den you think is used by skunk, and put the rabbit in the den. If there is a skunk in the den you will hear a noise, as it will try to catch the rabbit. Get ready to catch the rabbit, for it will not stay in if there is a skunk in the den.

If the rabbit stays in and you hear no noise, there isn't any skunk in the den, so put your ferret in and chase the rabbit out and catch it and go on to the next den.

When you find a den with skunk in it, stop up all the outlets but one and put a trap in it. Conceal it well and break a rotten egg near the trap. The skunk is then practically yours. Consult your game laws before using this method, for hunting with ferrets is illegal in some states.

RAY WHITE.

Rabbit as Bait for Ermine—To trap ermine (known as white weasel), build a small enclosure of stakes at the root of a tree or stump, put a piece of rabbit in the back part and set the trap in the opening left in the front.

CLARK C. BARKEY.

A Sure Set for the Fox—The following method for catching foxes I have tried successfully. It was first taught me by an old trapper.

Use No. 2 Newhouse traps. Fasten three in a bunch to an iron stake about eighteen inches long. Set each bunch in a sandy place in the woods where foxes are known to travel. Put cotton under the pans, drive the stakes into the ground the full length and leave the place as level as before.

Scatter old cheese, rotten eggs or sweet potatoes over the traps. When you come to look at them make as few tracks as possible, and do not go any nearer than is necessary to see if anything is in them. It is not likely that you will catch a fox the first night, nor will you often catch a fox on a bright moonlight night. Dark rainy nights are best. Paint the traps with melted beeswax to overcome the smell of the metal.

PAUL SCHULZE.

Want a Woodchuck Overcoat?—Why disregard the woodchuck? This animal is very cleanly, prolific, and lives exclusively



Coyote



SUGAR

25 lbs. 75c

Best granulated cane, if ordered with \$10 worth of our other groceries, or 50 lbs. for \$1.50 if with a \$20 grocery order; Toilet Soap, worth 25c, only 11c for 3 large cakes; 12 bars best 5c Naptha Soap, 35c; 3 cans Baked Beans with pork, 23c; 60c Tea, 39c; 40c Baking Powder, 17c and

10,000 Other Big Bargains

sold by us direct by mail to consumers at wonderful price reductions. You save middlemen's profits, losses and expenses. Absolute satisfaction guaranteed or your money back. **Grocery Bargain List Free. Send Now.** It's free—just send a postal. Check full of money-saving bargain offers. Let us show you how to cut your grocery bills one-third. Write now. Send for the big Grocery Bargain List TODAY.

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FARM AND FIRESIDE, Springfield, Ohio

Farm Notes

Farm and Factory Meet

OF LATE FARM AND FIRESIDE is being called on oftener than ever before to put consumers of farm products into direct connection with a farm source of supply. Many mill workers or railroad-shop employees, with wages in hand every Saturday, fail to see any good reason why they should not buy a car-load or several car-loads of potatoes or apples for winter use from a responsible farmer or an association of farmers. Also a winter's supply of butter, cheese, ham, cabbage, beets, turnips and chicken-feed—articles that can be kept in a cellar, storeroom or pit. For the mutual accommodation of these parties FARM AND FIRESIDE keeps a file containing the names of those who wish to sell direct and buy direct.

Wood-Sawing Luxury

THE building in the picture was originally built to house a four-horsepower gasoline engine for operating the buzz-saw under the projecting roof. Later it was found large enough to accommodate an anvil and some blacksmithing and machine-shop tools. The platform near the ground



One solution to the stove-wood problem

in front of the door is used for "upsetting" wagon tires. An upsetting machine is part of the equipment of this shop.

The particular advantage which recommends a building of this kind is the overhanging roof under which the wood sawyer can work with comfort on a windy or stormy day. A portion of the pile of sawed wood at the right-hand side of the picture testifies to the efficiency of the outfit.

The building is near the main road where the cordwood can be thrown off the wagon, within easy reach of the sawyer, without further handling. The building contains a stove for warming numbed hands and feet on very cold days.

Lost Capital

By Berton Braley

THEY'VE covered the house with a mortgage,

They've covered the farm with debt;

But they will not cover machinery

Except with the snow and wet.

It's given them faithful service,

It's good for a whole lot more,

If it wasn't left to rot and rust

Where the wintry tempests roar.



But they leave it out in the winter

Until it's a total wreck,

Then mutter that "farming doesn't pay

Though you work like a slave, by heck!"

The mower they leave unsheltered,

The sulky plow to rust,

And blame the loss to their luck,

Or the plots of a heartless trust.

They never would bury money

Where it's certain to rot and mold,

But they cannot see that machinery

Is money the same as gold;

So they leave it out in the open

To rust and wrack askew,

Till the thing that should last for twenty

years

Is gone in a year or two!

WHY is a cold winter followed by a late spring? Or is it? A German student of the weather has found that when the soil at a depth of two feet is about two degrees colder than usual it holds back the spring ten days. One would think, then, that when snow comes early in the fall and lies deep on the ground all winter, thus keeping the earth from deep freezing, the spring would be apt to come on more promptly after the spring thaw than in the case of a long, cold winter with little snow and deep freezing. Haven't some of our old and weather-wise readers some observations to report on this?

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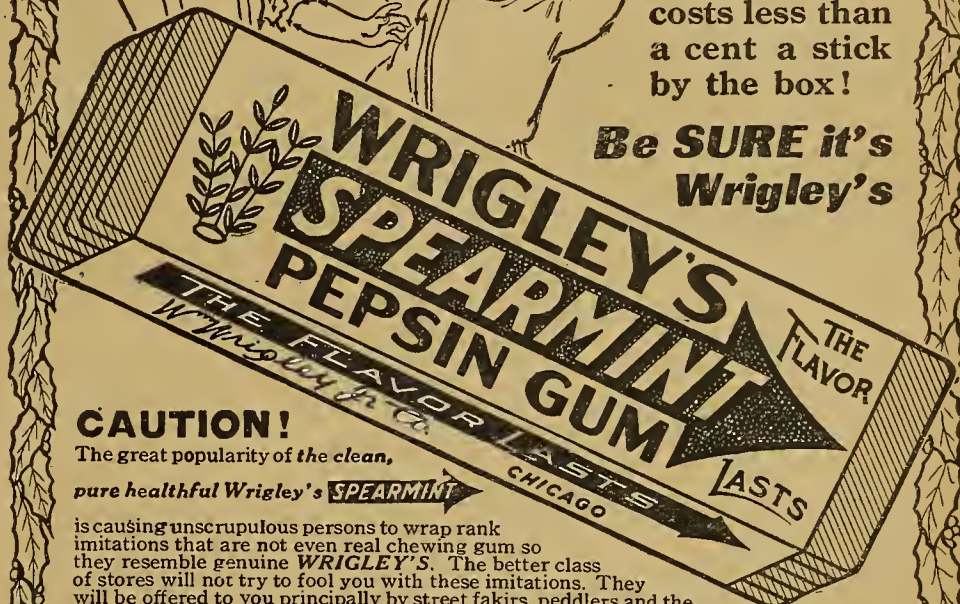
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Be SURE it's Wrigley's



CAUTION!

The great popularity of the clean,

pure healthful Wrigley's SPEARMINT

is causing unscrupulous persons to wrap rank imitations that are not even real chewing gum so they resemble genuine WRIGLEY'S. The better class of stores will not try to fool you with these imitations. They will be offered to you principally by street fakirs, peddlers and the candy departments of some 5 and 10 cent stores. These imitations cost dealers one cent a package or even less and are sold to careless people for almost any price. If you want Wrigley's look before you buy. Get what you pay for. We are inserting the above caution solely to protect our customers, who are continually writing us that they have been deceived by imitations which they purchased thinking they were Wrigley's.

If you find 12 gauge guns and loads too heavy and a bit slow in an all-day hunt, just get this splendid new

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It's a light, quick gun of beautiful proportions, superbly balanced, with every up-to-date feature: Hammerless; Solid Steel Breech, inside as well as out; Solid Top; Side Ejection; Matted Barrel; 6 Quick Shots; Press-Button Cartridge Release; Automatic Hang-Fire Safety Device; Double Extractors; Take-Down; Trigger and Hammer Safety. It's just the gun you want!

Marlin 12-gauge hammerless repeater, \$22.60

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The Market Outlook

Watch the Lambs

By J. Pickering Ross

THE prevalence of food quality with comparatively lighter supplies in the middle of last month brought top lambs over the eight-dollar mark and sheep up to \$5.45. These are the highest prices realized at the corresponding period for six years. The demand for feeders of all kinds remains active at from \$4.75 to \$5.25. It is a good sign of confidence in the future that breeding ewes are much sought for, as high as \$5.50 per hundredweight being paid for well-bred, even lots. Yearlings up to one hundred pounds are most desired, while older ewes range up to \$4.75. Considering that in one week at that period 196,200 sheep and lambs were disposed of in Chicago, while in the corresponding week of 1911 only 166,000 were marketed—top sheep at \$3.80 and lambs at \$6.25—the trade looks very encouraging. Another feature which should tend to allay the fear that the removal of the tariff would injure our home product is to be found in the fact that though thirty million pounds of meat of all kinds was imported between the date of the removal of the tariff, October 4th, and the following November 4th, prices for all kinds of live stock actually rose.

Wool is Firm

The wool market, too, is firm, showing no signs of depression. Large amounts of domestic wools have been exported, foreign markets are firm, and manufacturers everywhere are busy.

As lambing time approaches, or, as in the case of lambs for the early spring trade, it is already in progress, the careful shepherd is considering how he can best maintain the health and especially the milk-producing powers of the ewes. If, as the pastures began to fail, they were fed too exclusively on dry matter, such as grain and hay, the flow of milk is hardly likely to prove sufficient. If corn has formed the chief part of their ration it is probable that the formation of fat will have been secured to the detriment of that of the milk needed for the well-being of the lambs. Where this is the case a change to a ration of mixed ground oats and bran is advisable, but above all things a liberal

supply of succulence should be provided. If roots—turnips, beets, or mangels—are to be had, from one to two pounds per day added to a half-pound ration of equal parts of the oats and bran, with about two pounds of good clover or alfalfa hay, should suffice to keep up the condition of the ewes to the desired degree of nursing ability. If roots are not provided silage will have to take their place, great care being taken to insure its being in good condition, and that all unconsumed portions are removed.

A Wide Range of Feed Needed

Sheep, more than any other domestic animals, require variety in their food. In the fields they are able to cater for themselves, but in the yards they are dependent on their keeper, and it is up to him, if he hopes to make the best possible profit out of them, to see that this desire for variety is, as far as possible, gratified. After lambing is over, a much wider range of feeding is admissible, and in fact there is hardly anything in the range of grains, meals, succulence and roughage which may not safely be given to ewes with their lambs, so long as they seem to enjoy and fairly clean up what is given them. "Watch the lambs" is the best rule to follow; if they show signs of falling off the source of the trouble is almost sure to be found in something in the feeding or care of the ewes that needs a change. Impure water, foul air, rotten lair, dirty feeding troughs, want of salt, exposure to heavy rains, rough treatment of any kind—any of these evils, if continued, will greatly help to lessen the hoped-for profits.

The Tree Grew

A Horseshoe Kink That Acts Like Medicine

I HANG all my old horseshoes on my old and diseased fruit-trees, and nearly every time the tree gives an increased yield. I had a prune-tree three years ago that was nearly dead and only had a few leaves. Then I hung three or four old horseshoes



on it. It got more leaves, and the second year it yielded a large crop, and this year it gives promise of a still larger one. I believe the benefit to weak and diseased trees occurs by the trees absorbing the iron from the horseshoes and thus gaining strength and vigor. S. N. S., Penna.

What Serum Will Do

By L. K. Brown

IT SEEMS that the hog market has about reached its low point. Packers have pursued their bear campaign at every opportunity, and have had the price making in their own hands whenever the supply has been much in excess of the fresh-meat demand. However, the country has not been in a mood to accept a home market around seven cents and has balked, thus curtailing the supply, causing prompt reaction. Pigs have been as numerous as usual and have been the ammunition of the packers in their campaign. Because of the strong fresh-meat demand and prompt sales, they have been cutting up to a good-sized profit. Pigs are getting heavier as the season advances, thus improving the average quality and commanding a better figure. The range of prices has become narrower, as could be expected at this season.

In the provisions market the feature has been the heavy buying of lard for May delivery. Evidently speculators look for a small supply of this product next spring. The large packers have been indifferent actors in provisions, but when their fall accumulations have been disposed of, probably by Christmas, they are expected to be in humor to invest.

There is not much change in cholera conditions. A few new districts in Iowa have been recently infested. The public is finally waking up to the effect of cholera on hog-raising and incidentally on the cost of living. Senator Kenyon of Iowa has introduced a bill to appropriate one million dollars for agricultural purposes, seven hundred thousand of which is to be used in dealing with hog cholera. Such a large sum rightly expended would do the pork-producing industry untold good and would pay for itself in a very short time. It is to be hoped that the bill will be passed. If the experience of the Kansas City territory can be taken as an

example, the benefit of a seven-hundred-thousand-dollar appropriation can be estimated. One and two years ago, when cholera was so prevalent in Missouri and Kansas, large serum plants were built in Kansas City. This fall this territory has been but a small buyer, while Iowa has been so heavy a buyer that the plants have been taxed to their capacity. The wholesale use of serum in Missouri and Kansas may have made the country as a whole somewhat immune in the hogs that are left, so that there is but little disease this season.

It may be that next year Iowa will be able to show a cleaner bill of health because of the same reason. With the assistance of substantial federal aid, in a few years cholera should be under control.

Tight Credit—No Cattle

By W. S. A. Smith

THERE are two things mainly responsible for the shortage of cattle and high prices of beef caused by that shortage. First, lack of knowledge on the part of the farmer; second, lack of capital to do business with.

The main crop in the State of Iowa is corn, and yet a bulletin issued by Iowa State College at Ames for 1909 and 1910 shows that the average acre yield of alfalfa is 2.85 tons. When sold for the moderate price of \$9.80 cattle will pay ten per cent. interest on land worth \$270 per acre. The bulletin shows that the net returns from an acre of corn for Iowa is \$3.17 (this is after deducting such items as interest on value of land, taxes, plowing, cultivating, seed, harvesting), while the net return from alfalfa is \$14.01. It shows that three fourths of all the alfalfa grown in Iowa is grown in five river counties.

This same bulletin shows that when alfalfa was used as hog-pasture, with corn figured at forty-nine cents and hogs selling for six cents, the net returns were \$184 per acre. You can easily figure what it is worth to the farmer this year who has had his hogs vaccinated for cholera, with corn at sixty-five cents and hogs at eight and one-half cents.

One ton of alfalfa has as much feeding value as sixty bushels of oats worth \$24. Recently I bought inside the city limits twenty tons of prime alfalfa for \$10 a ton.

Take the corn crop. Any farmer husking out his corn and leaving the stalks is just harvesting sixty per cent. of his crop, and wasting forty per cent. Think what this means to the cattle business, when the whole crop is put in a silo.

Why then, if alfalfa and silage pay so handsomely, is there not more of these crops grown? In many cases it is through lack of knowledge and also lack of capital.

Building for Permanency

Those farmers who have retired never did so through any success they made of farming. They simply were able to retire through the advance in the value of their land, but the men who have bought that land at \$150 an acre must in every sense of the word farm it, and these are the men who, through silage and alfalfa, will produce our future beef-supply. But to do so they must have more capital to work with. The time has gone by for temporary improvements. Improvements on farms must be permanent and the cost figured on an interest basis, as, for instance, I pave part of my feed lot for \$500 figuring it will pay me handsomely in interest in corn and feed saved, and comfort and gain in cattle and hogs during the wet spring months.

If the farmer was in Germany he would on such an improvement borrow the money and have fifty years to pay for it.

Here he might borrow on other security for six months. The consequence is he does without it.

No man can go into the cattle business to any extent without capital or long-time credit, for no man can afford to buy a herd of cows to raise calves on a note due in six months and go surety that it will be renewed.

How I Sell Honey

By K. E. Hawkins

THE farmer bee-keeper is being fostered by the Government. They are issuing bulletins to help him keep bees. As yet there is nothing on marketing honey. However, a talk with any progressive bee-keeper will give you pointers in a hurry.

Have a few cards printed with your name and "Pure Honey" on them with your address. When you get into conversation with people away from home give them a card. I know this leads to orders, because I sold 350 pounds in one order by such a means last year.

There is no impure comb-honey on the market, as far as dilution with glucose and "manufactured" honey goes. Refute these statements when talking to prospective customers. Enthuse them with the purity of your product and its delicious flavor. Have a good product, and when they take the first bite it will mean a re-order this year and the next. The local paper with its want advertisements will enable you to sell locally in cities, while, when you have enough to ship you can advertise in the farm papers and sell it yourself.

50c and that's all

for this great winter underwear with its wear and warmth and quality. You get no frills with Hanes Winter Underwear, but you do get the exclusive features that make the best single garments sold for a half-dollar or the best union suits that a dollar ever bought. Now, read further and know why

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is what you want for all-round service. These are the features that mark Hanes Winter Underwear as the biggest value for the money on earth: the elastic collarette that hugs tight to the neck and keeps out the cold; the reinforced shoulders that won't sag or stretch; the improved cuffs that keep on clinging tightly to your wrists, and

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50c a Garment
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GARDENING

BY T. GREINER

Lima Beans Half Hardy

THE killing frost the middle of September hardly injured my Lima beans. This reminds me that this plant, although the seed when planted in cold soil in early spring is almost sure to rot, will stand a light touch of frost after it has once made its appearance above ground. And the vines often continue green and growing long after the first light fall frost. We have an abundance of nice tender Limas at this writing, and expect to have them until November at least. The varieties vary a good deal in size and length of pod, and size and number of beans in the pod. I like Dreer's Lima. The beans are thicker through, although appearing much smaller than those of Lima varieties with large flat beans; and they are crowded closely together in the pod, usually four, sometimes five and even six, to each pod. The market gardener may have his individual preferences as to varieties. The home gardener will find any of them useful and acceptable. The season in western New York is usually plenty long enough to ripen the entire crop of any of them. They are surely a profitable crop.

Some Good Melons

I like melons—that is, good melons. Probably there are few persons who would refuse a slice of a thick-meated, well-ripened, sweet melon such as shown in accompanying picture. The little Emerald Gem probably



Are you planning to grow melons like these?

represents the standard of quality, but the plant is lacking in thrift and productiveness. The variety seems to have run down—degenerated. It is worthy of being bred up, true to the original. Next in quality we have melons of the type shown in the picture—the Paul Rose and Gold Coin. The latter is perhaps a little earlier and more productive. Paul Rose is an ideal market melon, of remarkably uniform, medium size and oblong shape, deep salmon-colored flesh, small seed cavity and closely and deeply netted skin. Gold Coin is often larger and more variable in shape, some specimens appearing to be almost round. All these, however, make "delicious eating."

Citron Preserves

Years ago we always tried to raise a few citron watermelons for making preserves. These seem to have gone out of fashion. At least "citrons" are rarely met either in home gardens or in markets. They are as easily grown as other watermelons, even in localities with short and cool summers. The solid fleshy part—that next to the rind—of any watermelon, however, is just as good for preserving in sugar as the real citron watermelon. The commercial citron, about which a North Carolina reader inquires is not a vegetable product that could be grown in our Northern gardeus, as it is the candied rind of the fruit of the citron tree, *Citrus medica*. If you have neither citron watermelon nor any other watermelon that you could use for preserving, try once the flesh of a solid pie pumpkin or sweet-potato pumpkin. It answers the purpose quite well.

Thick-Meated Peppers

A North Carolina lady reader inquires about "large, thick-meated sweet peppers." All she has grown are not thick-meated like the peppers she can buy.

We now have quite a number of good, sweet peppers that are fairly thick-meated, among them the newer Neapolitan, an early sort but not so large as some others; Magnum Dulce, a very large and very good sort; Chinese Giant, Ruby, Upright Sweet Salad, etc., all very sweet and good. Among the smaller and "hot" or pungent, peppers we have Red Chili, Cayenne, Red Hot, and Tabasco. Here is a variety that should satisfy any taste and purpose.

Parsnips for Winter

I neglected to plant parsnips last spring and I miss them. During fall and early winter we usually have an abundance of vegetables, and can manage to get along without parsnips, but a few messes of them, after they have once been exposed to frost

or freezing, in the fall, are very acceptable. I dig a half bushel or more just before what we expect is the final freeze-up of the season, along in December, and put them in sand in a corner of the vegetable cellar; or, if not packed in sand, at least covered some way so that they will keep fresh. The balance of the crop is left out in the field over winter, and dug as soon as the frost is out of the ground in spring, for use or sale. Usually there is a good demand for parsnips at that time, and I have had grocers pay \$1.50 to \$2 per bushel at times of scarcity.

The Potato Tuber Moth

Most of us have never heard of it. But it is a pest in California potato fields, and is found in Washington. It chews tobacco in Florida, the Carolinas and Virginia, where it passes under the name of the splitworm. It is found in Texas also.

It likes eggplant and ground-cherry plants. It infests bull nettles and horse nettles, and lives over in any of the plants it infests. It seems as if we ought to be interested in this moth wherever we engage in farming, whether it has reached us yet or not.

How to control it? The old story, good, clean cultivation and rotation of crops. It almost seems as if the bugs and moths and worms will finally force all of us to be good farmers! Good, clean cultivation, and the destruction, not only of all infested potato plants, but the ground-cherry plants, bull nettles, horse nettles and eggplant. As soon as the insect has attacked these plants they should be burned. If left by the roadside or fence they will furnish winter quarters for the moth.

Crop rotation is also necessary. Where the business of potato growing is carried on

by the year-after-year plan, the tuber moth will present a perplexing problem when it reaches these "spud" specialists, if they are so unfortunate as to have that occur.

Live stock turned into the potato fields after digging will help clean up.

Those who desire to study this matter should send to the Division of Publications of the United States Department of Agriculture at Washington for Farmers' Bulletin 557.

Saving Seeds

The home garden is hardly ever the place to save seeds that are wanted pure and true to name, unless only one variety of each kind is grown. Tomatoes will readily mix when more than one variety is planted in close proximity. Beans mix readily. So will corn varieties that tassel and bear at the same season. So will different varieties of melons, cucumbers or other vine fruits. In fact, there are few vegetables of which more than one variety is planted in a patch from which I would care to gather seeds. When a tomato variety is planted in a block by itself I do not hesitate to save specimens from the best plant or two for seed, and can expect to have them come fairly true. Seeds saved from specimens selected in a mixed patch may give plants and fruit wholly different from the parent plant or specimen.

Failure of Cauliflowers to Head

In many instances this year cauliflowers have made thrifty tops without forming heads. Sometimes, when the season is not favorable, cauliflower plants grow stalks and leaves, until all at once, and when we already had given up hope, the heads form and grow to respectable size and perfection. I had some do that in my garden. Cauliflowers like rich soil and plenty of moisture, but hate hot and dry weather. Do not get discouraged. If you can get nitrate of soda without much trouble or excessive cost, apply a handful around each plant. That often helps.

When heads begin to form tie or pin the outer leaves over the heart so as to protect the forming head against the direct sun rays. That will keep the "flower" white and most attractive.

EACH member of Uncle Sam's family had just one chance out of two of getting a California cantaloup from the Imperial Valley. From the 6,000 acres in that valley devoted to cantaloup culture fifty million "cants" were this year marketed, selling for the lump sum of \$2,335,000—five cents apiece, and netting the growers about \$100 per acre. It would have required a train of refrigerator cars thirty miles long to hold the crop.

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P. A. is just as fine rolled into a cigarette as packed in a jimmy pipe. You try it and know for yourself just how good and true this wonderful tobacco really is. It certainly will make a hit with you because it makes a hit with every man who likes "the goods."

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"I was losing flesh all the time and at last was obliged to give up the school I was teaching and go home.

"Mother put me to bed and sent for the doctor. I was so nervous the cotton sheets gave me a chill and they put me in woollens. The medicine I took did me no apparent good. Finally, a neighbor suggested that Grape-Nuts might be good for me to eat. I had never heard of this food, but the name sounded good so I decided to try it.

"I began to eat Grape-Nuts and soon found my reserve energy growing so that in a short time I was filling a better position and drawing a larger salary than I had ever done before.

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Live Stock and Dairy

Peanut Culture in Oklahoma

By J. L. Cuneo



FINISHING hogs for market or getting them ready for butchering for home consumption has put the farmers here in Oklahoma and in other semi-arid regions of the Southwest to a severe test during the past three years. The excessive drought, together with the hot winds of June and July, has made the corn crop a practical failure all over the Southwest.

Hog-raisers were brought to a realization of the fact that they could no longer depend on the corn crop to finish their pork, and after much experimenting found that Spanish peanuts met the requirements in every way.

Corn and Peanuts Compared

The cheapness of pork production, the profit from the amount fed and the easiness with which this crop is produced has proven that Oklahoma is no longer dependent on the corn crop, for the Spanish peanut is more easily raised, and the profit derived from an acre is almost double that received from an acre of corn.

The peanut is one of the best drought-resisting crops that can be raised, in fact it will stop growing and wait for rain. The plants will wilt under the hot sun of the day, but will be fresh and green the next morning. It is very productive and will do well on almost any kind of soil, but is best adapted to a light sandy loam having a clay subsoil.

In the summer of 1911 I had four acres of peanuts, and, although not a drop of rain fell for forty-five days, this crop continued to grow, and forty bushels per acre were harvested. In 1912, on the same kind of land and with half the cultivation of corn, I gathered seventy-five bushels of peanuts and twenty bushels of corn per acre.

The most profitable way of raising peanuts is to plant the crop, and after the nuts are filled and matured cut the hay and cure like clover, and let the hogs harvest the nuts.

Hogs Fattened on Peanuts

Last year the writer had a small patch of peanuts, a little less than an acre. On September 15th the vines were cut, and six hogs averaging ninety pounds each were turned in to harvest the nuts. On November 15th the hogs were again weighed, and they showed a gain of 750 pounds, equivalent to \$58 at the price hogs were then selling. They were then taken off the peanuts and fed Kafir-corn two weeks and were ready for the market.

While bigger gains and more profit can be secured by feeding peanuts in this way than any other, peanuts alone will not put the hogs in the best shape for the market, as the flesh will be soft, and some grain feeding for a week or ten days is advisable. Most farmers in Oklahoma are using Kafir-corn and milo maize, both drought-resisting crops. These grains are generally fed in the head, although occasionally as ground

grain. While the hogs are on the peanuts, some feeders give them about one-fourth grain ration and find that this balances well with the legumes and hardens the flesh and turns the hogs off the peanuts all ready for the market.

In another patch of peanuts grown by the writer in 1912 cow-peas were drilled in between the rows at the last cultivation. These peas matured by the time the peanuts were ready for the hogs. The hay was not cut, but the hogs were turned in. The hogs in this bunch made more rapid gains than those on peanuts alone, the flesh was firmer, and they were fit for the market without any grain feed. The animals consumed practically all of the pea-vines and peanut-vines, as well as the nuts and grain.

In this manner hogs can be fitted for the market with very little work and in the cheapest manner possible. The work of planting or cultivating either of these crops is small, and the hogs do the harvesting. All that is necessary to furnish them is plenty of fresh water.

The peanut is also proving an excellent money crop, as the yield per acre is from fifty to one hundred bushels, worth from seventy cents to one dollar per bushel. The yield of hay averages one and one-half tons per acre and is about equal to alfalfa in feeding value. All kinds of stock relish it and do well on it. When vines, nuts and all are cured together it takes the place of hay and grain both. Horses fed on it will stand much hard work and keep in good flesh.

The land for planting peanuts should receive the same preparation as for corn. The crop should be planted before June 15th in rows three feet apart, and the nuts dropped from fifteen to eighteen inches apart in the rows. The seed should be soaked in water from thirty-six to forty-eight hours before planting. Used in this manner, one bushel will plant an acre. The cultivation should be shallow and frequent, but a good crop can be raised with less than half the cultivation necessary for corn.

Peanuts enrich the ground on which they grow. The nodules on the peanut are much larger than those on clover, and in consequence a much larger quantity of nitrogen is taken into the soil from the air.

Keep the Strainer Clean

By C. M. Weed

FOR some time my well-pump did not work satisfactorily. I put in a new valve, but this did not help much. The trouble seemed to be that the water could not get into the pipe. So I took the latter out and found the brass strainer at the bottom completely clogged with rust. This came off easily when the strainer was lightly tapped with a hammer and then scrubbed with water.

This pump is only used part of the year. When it is not in use the rust forms on the pipe above the brass and runs down on the latter to clog the openings.

Horseshoe Tips

By R. E. Rogers

EVERY year the cost of keeping the horses shod is greater. So it is quite fitting if we can find a way to save some of these bills. It is customary to have one set of regular calk shoes set once at least after putting them on new. The shoe does not wear out, but is made unfit for further setting because it is necessary to turn the rear end down to make the new rear calks. Now I have found long ago that a calk at the rear made like the front one is a much better foundation for the horse to walk on except on icy roads than the little point made by turning the end of the shoe down. So next time have three flat calks put on the old or new shoes and save the difference between resetting and a new shoe. It will take a fight to get a smith to do the work this way, but it is worth while, as it really gives the horse better footing than the old way.

Each quarrel with the dairy cow reduces her milk-supply.

Fistula of the Withers

By Dr. A. S. Alexander

"I HAVE a mare," says a Tennessee reader, "that had a swelling on the right side of her withers. I rubbed it with liniment, but it became worse, and finally burst. I have bathed it every day, but it seems to get no better, although the mare isn't lame."

This mare has fistula of the withers due to a bruise. It may have come from being bitten by another animal, or from a bad-fitting collar, or from rolling and striking the withers on a stone.

It should have been opened before it burst, as pus will have burrowed more deeply, not finding vent. In some cases, however, the abscess goes away, if cold, wet packs are kept upon the part.

At the present stage it would be best, if possible, to have a graduate veterinarian treat the case. After clipping off the hair, cleansing the skin and probing to find the direction and extent of each pocket, they should be laid wide open, right down to the bottom of each, and diseased tissues should



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be cut out. If bleeding is excessive it may be readily stopped by the use of Monsell's powder, or oakum or cotton batting saturated in Monsell's solution of iron.

When the cutting has been completed and the bleeding stopped swab the entire wound with tincture of iodine, and then pack the cavities full of oakum saturated in a mixture of equal parts of turpentine and raw linseed-oil. Renew the oakum dressing once a day, and twice a week use the iodine tincture as at first.

As soon as the wound is healing up fast, clip the hair from the enlargement, and blister it every ten days with cerate of cantharides, as well as continuing the treatment of the wound.

Why Not Use Concrete?

THIS was the scene on a large Illinois farm in August. Some few weeks previous the large barn running between these two silos and the two silos from which the photograph was taken burned to the ground. All of the wood part of the concrete silos shown in the picture was eaten away by the flames, but the silos stand to-day a monument to permanency. The owners learned



It was concrete that saved the day

the lesson, and are now constructing, on the ground marked by the debris in the picture, a large concrete barn for dairy cows. Wood has its place, but so has concrete.

NEVER give grain to a tired horse. Let him rest and nibble hay for an hour or two first. Grain in the manger before the horse comes in looks bad.

Danger of Milking-Tube

By Dr. A. S. Alexander

AN OHIO reader asks: "Can you tell us if there is any remedy or cure for spider in a cow's teat? The teat was stepped on two days ago, and we cannot get milk from it without a tube. It is very sore and seems to be getting worse."

By the term "spider" I presume you mean an injury and stoppage of the milk-duct in the teat of the cow mentioned in your letter. In using a milking-tube to draw off the milk in such a case as this, more harm than good is certain to result unless the greatest possible care is taken to perfectly cleanse and sterilize the tube by boiling and baking before using it each time. Unless so sterilized the tube carries infective matters into the udder; garget (mammitis) is caused and the quarter ruined.

Proper treatment in the case such as you describe will consist in fomenting the udder with hot water three times a day and at each treatment giving the gland a thorough massage with the palms of the hands. At night rub in some warm melted lard. Three times a day soak the injured teat in a saturated solution of boric acid used as hot as the hand will bear. Smear some carbolic vaseline upon the tube before insertion. If any sore is seen in connection with the injury apply twice daily a little of a mixture of one dram of boric acid mixed in one ounce of balsam of Peru. Dispense with the use of the milking-tube just as soon as possible. Be particular to keep the stall floor clean and well bedded.

NEVER put a horse up dirty or muddy for the night. At least brush his legs and belly, and straighten his hair.

SPEAK gently to the horse, and do not swear or yell at him. He is a gentleman by instinct, and should be treated as such.

What Makes Milk Rich?

GET-RICH-QUICK schemes are always interesting, even though only a few persons are clever enough to make them work. Naturally ingenious dairymen have given much attention and thought to raising the richness of milk in the quickest manner.

The first idea that occurs to the beginner is that if you feed rations rich in fat the butterfat content of the milk will go up, but this is not so. At least it doesn't work commercially, though if a cow is starved till her body is mostly skin, bones and lean meat, the fat content of her milk responds slightly to the fatty portion of the ration. But she gives much less milk and much less total fat even though the milk is a little richer.

In Europe, especially in Denmark, Germany and Sweden, where the dairy cow has been the object of study for centuries, a great many well-established facts have been collected on the richness of milk. These truths which represent the best of the world's knowledge on this matter were, to

our knowledge, first published in America in *Hoard's Dairyman*, from which we condense them.

Principal Hereditary Influences

1. The percentage of fat in the milk can be best increased by judicious breeding.
2. A bull tends to transmit to the heifers sired by him the same percentage of fat as was present in the milk of his dam or granddam.
3. To increase the richness of the milk of a herd, use only a bull from a family of cows that produced richer milk than the average of your present herd.
4. While the influence of both bull and cow on the offspring are about equal, the bull has a greater influence because of the greater number of offspring that he has.
5. The quality of butterfat depends as much on the quantity of milk as upon its richness, and this should be considered in consulting records and selecting breeding animals.

Relation of Fat to the Feed and to Other Constituents in Milk

Milk is about seven parts water and one part dry matter. For a given richness of milk the amount of fat bears an absolutely definite relation to the total dry matter.

Rich milk, however, does not have as much dry matter in proportion to the fat as low-testing milk. This fact is independent of breeds, feeds and period of lactation.

In two per cent. milk the total dry matter is five times as great as the total butterfat, whereas in six per cent. milk the dry matter is only two and one-half times as great. In other words, the higher the test, the more feed is made into fat and less into dry matter. But when the fat percentages exceed 4.5 per cent. the advantage, while still existing, becomes less in proportion. When milk is sold on a basis which entirely disregards the fat content the production of low-testing milk is most profitable. But when, as in most cases, the percentage of fat is the factor in the basis of payment a high percentage is desirable, since only about thirty per cent. of the value of the extra fat is needed to pay for the extra food; the remainder is profit.

We have now followed the dairy experts all around Robin Hood's barn and arrive with them on what we have always believed—namely, that, first, we ought to have at the head of the herd a good bull who comes from a family having higher butterfat records than our present herd; second, we ought to have good cows, and, third, we must feed them well.

While these things are by no means new to us, still it is fine to know that our observations have been correct and supported by the laws of heredity and animal nutrition.

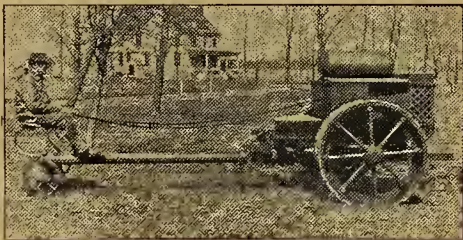
Reins for Driving Tractor

By Frank C. Perkins

THE driver of this gasoline tractor will probably say "get-up" and "whoa" to it very frequently, for it is controlled by reins in the same manner as a horse.

The tractor is the outgrowth of efforts to produce a strictly one-man outfit, especially adaptable to the requirements of the small farmer.

It is held that, while the large tractors have proven their utility on the large farms



Driving the "modern" horse

of the West, a tractor for the small farm must be adaptable to many different kinds of work in order to take the place of the horse, as now required.

This two-wheel gasoline tractor will pull any two-bottom sulky plow, a roller, disk, drag, seeder, grain-binder, corn-harvester, mower, manure-spreader or a wagon, and the changes from one implement to another are easily made, as special equipment is not required. It is maintained that it will do all kinds of belt work requiring stationary power and will run the corn-sheller, thrashing-machine, silo-filler, husker, cream-separator, lighting-dynamo, wood-saw, cement-mixer or any other machine up to the capacity of the engine, as it is a portable engine as well as a tractor.

It is pointed out that this tractor can be used to haul heavily loaded wagons or carts, and is especially useful where the time of loading and unloading is important.

The control of the gasoline tractor is effected by means of three reins. In hilly country a fourth rein is added to operate the brake.

The main frame carrying the engine and gears is a semi-steel casting which makes a unit of the whole tractor, precluding all possibility of twisting or binding of the shafts in their bearings. The engine used is a four-cylinder, four-cycle, long-stroke motor built to stand hard service. Fuel economy is one of its principal features.

Rheumatism in Horses

By Dr. A. S. Alexander

A WYOMING reader states his case: "I have a valuable 1,700-pound mare ten years old. She is very lame, and has been for two months. She became lame first in her right foot. In two or three weeks she went lame in her left foot, but became all right in her right foot. There is no sign of ringbone or sidebone. She has not worn shoes for two years. There is no swelling that I can detect. The lameness continues to change location every now and then. Is rheumatism the trouble?"

The lame mare must have rheumatism; but I would strongly advise having her shod. Cover the soles with pine-tar and oakum, then with thick leather pads, and then with flat bar shoes. Reset the shoes once a month. If the lameness persists when this shoeing has been done, clip the hair from the hoof-heads of both fore feet, and blister, one at a time, with cerate of cantharides, until both have been blistered three times. If at any time there is a bad attack of lameness try the effects of a half-ounce dose of salicylate of soda given twice daily in the feed. Keep her in a well-lighted and perfectly ventilated stable. In shoulder lameness the horse stands down flat and normally on fore feet. In foot lameness the lame foot is stuck out in front of the body. In acute founder both fore feet are stuck out. In chronic founder the horse starts with feet thrust out and soon warms out of the lameness.

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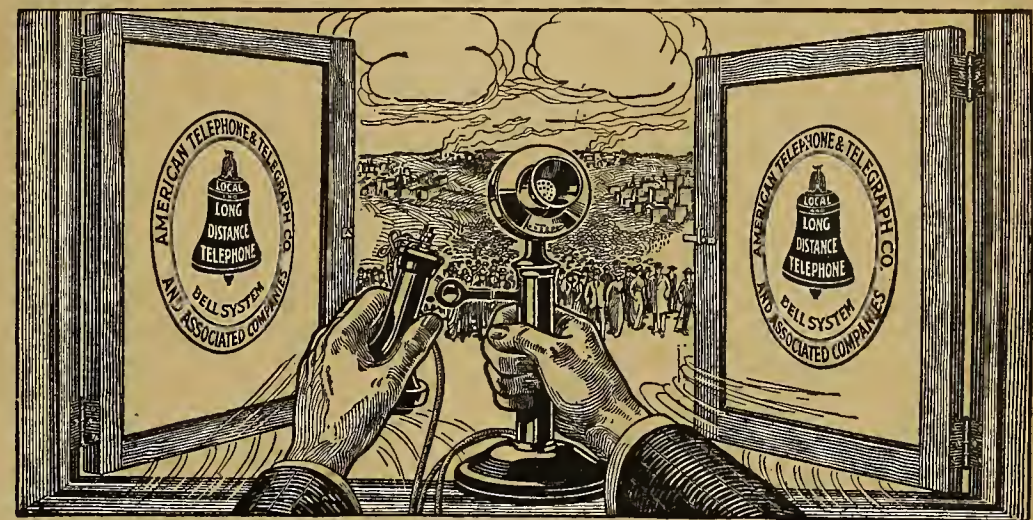
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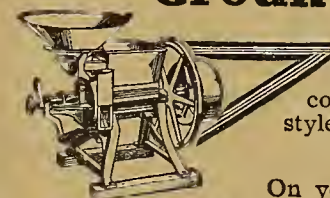
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Combined Roller and Harrow

By John F. Mahan



THIS is my arrangement for harrow and roller combined, which I have found very effective. Drive in harrow-teeth, as shown in sketch, having same loose enough to raise every other tooth if desired. I use a fourteen-inch roller. I have nailed two runners on the spike end so I can pull where needed, without using sled. The device is arranged to be used from either end. A board on top allows the operator to stand or arrange a seat, as seems best.

Two Grasses for Droughts

THIS article consists of notes made by Mr. C. Bolles of Red Willow County, Nebraska, on two interesting new grasses, Tunis grass and Sudan grass.

The experiments made up to this time with Sudan grass lead to the expectation that it will soon become one of the best annual hay crops of the regions usually called semi-arid or subhumid—the "dry-farming" regions.

The region where the tests were made which are described below was terribly burnt out by the dry weather this summer.

Tunis grass—I got seed too late to put in a regular test plot. I planted it June 29th. It came up July 6th and headed August 23d. It ripened about September 15th. It grows perhaps five feet high. It has twenty to thirty stools. Aside from the stooling I can see no difference between it and Sudan grass. Millet planted the same day was eaten down as it came up by hoppers, as were many grass plants. In point of drought resistance it is no better than the other (Kafir, for example) sorgho plants.

Sudan grass—This was planted in regular test plots (with other sorghums) May 24th. August 5th some of it began to fag, and one row of the plot was cut. This made close to the rate of 2,200 pounds per acre of dried fodder. This was fed to cattle running on poor pasture, and they seemed to like it. All was eaten except a small portion of the butts. No rain fell until long after cutting, and that particular part of the test plot dried out. However, the grass sent up a second crop that grew quite high. Altogether it made perhaps 2,400 pounds per acre. The cut grass stood three to four feet high. In the double-listed plot the grass did better, though this, too, dried out in spots. Sudan grass puts me in mind of what we here call hull grass that grows along the creek and low places. I suppose some would call it a form of millet or water grass. However, Sudan grass has heavier stems and not so many leaves. My tests show it isn't more drought resistant than Kafir or some of the other sorghums, but will make lots of forage under any kind of conditions—if given a chance at all.

We Have to Guard Against Hoppers

One should keep in mind the hoppers. At first they didn't care for Sudan grass and ate out the millet planted beside it. But after the millet got tough and the grass was two or three feet high there were more hoppers on an acre of the grass than on any two acres elsewhere. The first hoppers were on it up to August 15th. The second crop of hoppers were on it September 9th. Hoppers seemed to like the grass leaves very much and held the plants back right up to August 15th. This planting (acre) was beside harley and wheat. I am thinking of planting five acres next year for seed—an article that is much sought after.

I tried to cut the stuff with a hinder, but the heavier plants were hard to cut—too many suckers for the sickle to cut at one time. However, the hinder will go through them. I see no reason why this wouldn't be a fine forage plant if one would only plant it away from grain fields so the hoppers wouldn't get to it.

It wasn't lack of rainfall, but hot winds, that got us this past summer. They were almost continuous from June on. And right here let me say that until it got very, very dry this grass didn't roll a leaf as some of the others did. This was very noticeable.

These tests of new sorghums are very significant. Suppose that every farmer in the regions devastated by the drought had had a few acres of either of these grasses, especially in those localities where alfalfa was not able to make a crop? A ton or a ton and a half of good hay per acre would have made the problem vastly easier.

Sudan grass has been grown in test plots, and in small fields in Virginia, Minnesota, South Dakota and many other States. It yields under good conditions twice to three times as much per acre as Mr. Bolles obtained under drought conditions. It seems like a crop well worth considering by farmers east and west as a forage plant which will insure the farm against hay bankruptcy in dry years, and make a good crop any year.

IF YOU want anything in this world you've got to hustle right after it. Delay and wishing won't set an onion-bed, or shovel away the snow, or do anything else.



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Each of these articles is handsomely lithographed and embossed in many colors. This is the most exquisite assortment you have ever seen. The coloring and designs are typical of the Christmas season. You will want the seals to paste on your Christmas packages, the cards to enclose with your Christmas presents, and the Christmas and New Year post-cards to send to your friends with glad holiday tidings.

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Offer No. 2

Send 50 cents for a one-year subscription to *Farm and Fireside*, 26 numbers, either new or renewal. Your Christmas Surprise Box will be sent you by return mail.

In either of the above offers the subscription may be a neighbor's or friend's, but we will send the Christmas Box to you unless you request otherwise.

Club-Raiser Special

Send 70 cents for two different yearly subscriptions to *Farm and Fireside* at 35 cents each. One of the subscriptions may be your own. This Surprise Box will be sent you as a special premium.

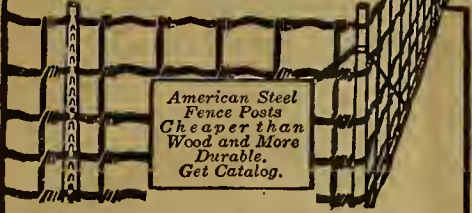
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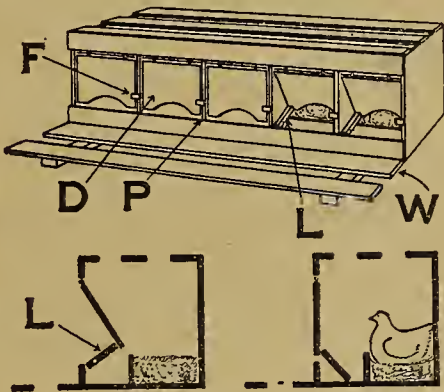
Poultry-Raising

Trap Nest That Stays in Order

THE trap nest here described is the type that was used at the International Egg-Laying Contest at Storrs, Connecticut. It is very simple in operation, and can be made by anyone handy with tools.

The upper figure in perspective shows five nests arranged side by side. By making the nests in a series considerable lumber is saved. Swinging doors (D) are fastened to a rod running the entire length of the box. Stops (F) prevent the doors from swinging outward. L is a lever pivoted to the partition (P) so that one arm is about five times as long as the other. The lower cross-section sketches show how the lever and door are arranged.

To enter the nest the hen flies onto the walk (W) and crowds under the door (D) which is partly open. In so doing, she lifts the door slightly, and the long end of the lever (L) falls, being heavier than the short end. The door swings shut passing over the pivot and the shorter end of the lever. When the door is shut the lower end of the lever rests on the floor of the nest, and the short end acts as a stop on the inside, preventing another hen from crowding into the nest. When the egg is gathered the trap nest is set again by raising the long end of the lever and propping back the door. The two right-hand nests in the up-



A nest that is easy to operate

per sketch show the position of the doors and levers before the hen enters. The other nests show the traps closed.

My Secret to Winter Eggs

By Pearl Chenoweth

WE HAVE seventy-five single-comb Brown Leghorns which have laid from thirty to forty eggs a day during November. Their rooms are cleaned every day, and they are free from lice. They have lukewarm water in clean pans at daybreak every morning, and I notice that most of them take a drink the first thing. Next they get their blood warmed up by scratching, for every night we scatter one and one-half gallons of wheat in deep litter in the scratching shed. This keeps them busy and happy until the frost is gone, when they are turned out. They have very little range. A quantity of native lime has been dumped in the pen, and thither the hens run as soon as they are released. They eat it like corn and never seem to tire of it.

Egg-Producing Rations

My hens have a warm dinner every day at noon planned as carefully as that for the family. Sometimes it is a kettle of oats boiled in salt water, a crock of milk and a stewed pumpkin. Sometimes it is boiled potatoes, lye hominy and cabbage. Often it is cooked wheat with Kafir and oats uncooked.

When the eggs are gathered, usually at four P. M., the hens are fed as much shelled corn as they will eat. I have trained them to come at the ringing of a bell. It is the only way I can get them from the millet stack.

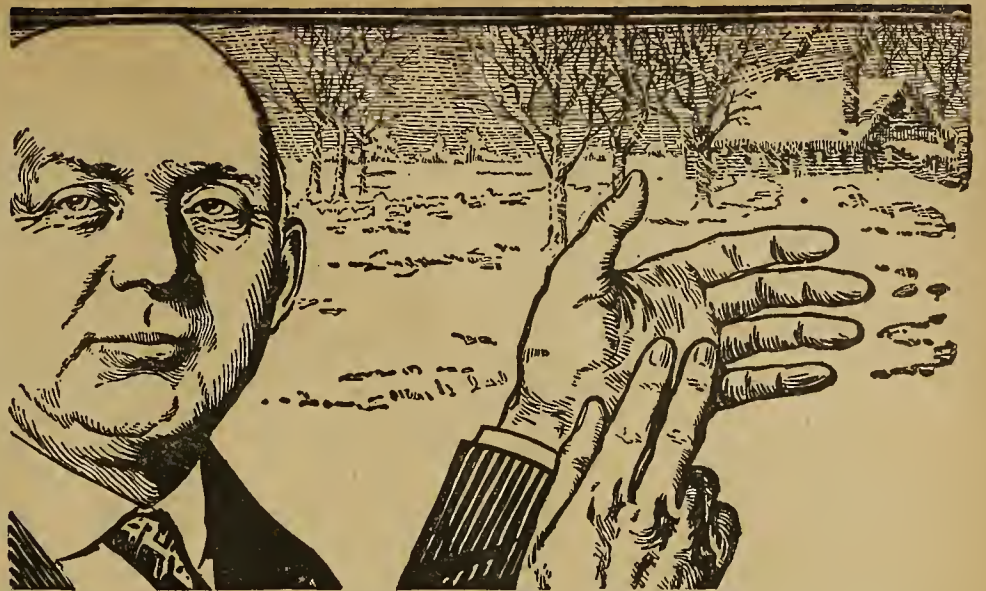
The last thing before the chickens go to roost—and often half the flock get off the roost—I feed a warm mash, bran or shorts for foundation, mixed with table scraps and beef meal. Of this they are fonder than anything, and thus more food is consumed than if the best were given first. Aside from this advantage, the warm food will keep them warm until well toward morning, and every bird is at work again as soon as it is light enough to see.

Meat Scraps are Good Food

Thrice a week we feed meat scraps bought in hundred-pound sacks at the packing house. The chickens at first refused it dry, but by pouring hot water over it and allowing it to stand overnight it makes a feast for them.

Several times each day the watering pans are emptied and rinsed and refilled. Oyster shells, ground bone, sand and ashes are kept before the flock always.

We are preparing for winter by lining the roosting room with an old ingrain carpet and covering the floor with straw. Our chickens are never turned out in the cold.



Let Me Help You Get Winter Eggs

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I make my biggest egg profits in the winter months, because I see to it that my own hens lay regularly then. You can make your hens lay in winter the same as mine do. Under ordinary winter conditions hens lay poorly, because they are cooped up, deprived of green stuff and cannot get exercise. The egg organs consequently become sluggish and inactive and the hen puts on fat instead of converting her ration into eggs. Hens must have a tonic during winter to tone them up, invigorate the dormant egg organs and keep them healthy.

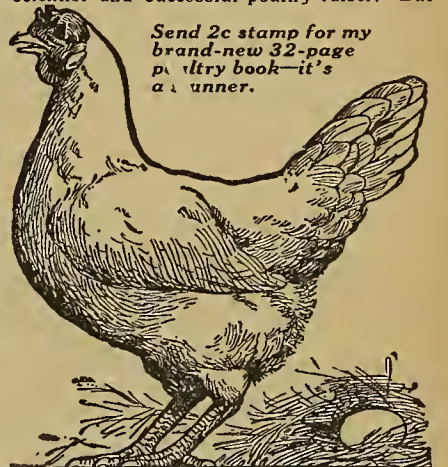
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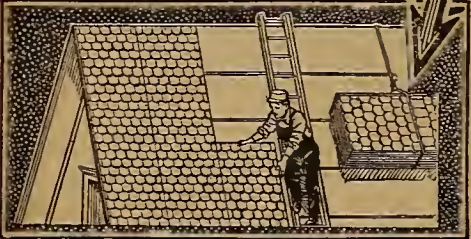
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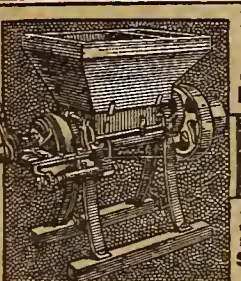
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Farm Notes

Why Shoes Don't Last

Some Plain Directions That are Not Followed as They Should Be

By S. E. Lytle

THE cost of all grades of leather has steadily advanced. In order to offset this additional cost and still purchase a good grade of shoes, we must give our boots and shoes the care they deserve and so gain from them the utmost service.

It is just as important to keep them clean and in good condition as with any other wearing apparel. Good shoes have been ruined by holes having been cut in them in order to ease corns underneath, when, at a very small cost, results could have been secured, yet the shoe saved.

Never put wet, muddy shoes away before they are cleaned and dried. Never place shoes in an oven or close to intense heat, because they are liable to scorch. Heat causes leather to become brittle.

The leathers most commonly used for boots and shoes are vici kid, box calf, patent or enameled, Russia tan and chrome elk. The vici-kid leathers are the softest, and are ideal for all light-weight shoes, the box calf being a heavier leather, although it is made in light weights. Tan leathers are made more into dress shoes than for all-around work, but it is generally accepted that they give more wear than black. The so-called chrome "elk," which comes in tan, black, olive and a light gray, and which is made into shoes and boots for men and boys, gives more wear for general work than any other grade of leather.

Keeping the Water Out

There is no substance that will make boots or shoes absolutely water-proof. That is, for any length of time. As a rule, most water-proofing compounds contain animal fats, mineral oils, rosin, wax and solutions of India rubber. The writer has tried the following two and find they are very satisfactory.

One-half pound of mutton-tallow.

Four ounces of beeswax.

Two ounces of rosin.

Melt all together, and apply hot with a small brush, rubbing it in well with the hands, particularly around soles and seams.

Rubber Solution—Melt together four ounces of neat's-foot oil, four ounces of beeswax and 2 ounces of India rubber until thoroughly blended. Warm the leather, and apply hot.

Shoe-trees, made of wood or metal, placed inside of the shoes keep them in shape. The trees come in handy, especially when shoes are wet, as it prevents them from curling and getting out of shape while drying. Satisfactory ones may be made at home by filling old hose with sand, bran or saw-dust. There are to be had in the markets, also, shoe-stretchers. This article should be in every home in the land. If a shoe hurts or pinches at any particular point, simply place the stretcher inside and stretch it until you get relief, thus doing away with the cutting of shoes. Your shoe-dealer will gladly stretch your shoes for you, or you can often get relief by laying a cloth wrung from hot water over the tight place. Cut the shoe only as a last resort. It would be best to say never cut it.

It is Best to Buy Polishes

Polishes can be made at home, lamp-black being the base of most black polishes, but there are so many high-grade polishes on the market, and at such a low price, it does not pay for one to attempt to make them for home use. To make boots or shoes soft and pliable, rub warm mutton-tallow or neat's-foot oil into them thoroughly. These are much better than most any other oils or fats for this purpose. Have shoes and boots clean and dry before greasing them. When shoes wear through the first sole have them repaired as soon as possible. Do not wait until they have worn through both soles; and likewise have an awl and some thread on hand, and when a rip shows itself "nip it in the bud." Heel-plates come in many sizes, are cheap, and anyone can nail them on. They will save you a trip to the shoe-shop to have the heels built up. Shoe-lasts are cheap and will be found very useful.

Use Linseed Oil for the Squeak

To prevent shoes from squeaking place them in a pan of linseed oil, just deep enough to cover the soles. This will not only prevent this nuisance, but the oil will toughen the soles. Be careful that the oil is not too deep, if it gets on the uppers it will stain them, and the worst thing is it won't come off. If your boots or shoes are inclined to be damp inside place cork insoles (not the real thin ones) in them, and your feet will keep nice and dry.

In conclusion: the broad, low-heeled shoe will give more genuine comfort than will be gotten from the narrow, high-heeled variety.

Will You Accept This Christmas Present from Farm and Fireside?

YOUR own farm paper—Farm and Fireside—wants to make a Christmas present of a year's subscription to every reader who sends his renewal before Christmas. We hope that this present will be accepted by every reader of this paper. If you have liked Farm and Fireside during the past year, we can promise you that you will like it much more during the coming year.

EDITOR QUICK has more new ideas for the next year for Farm and Fireside than we could explain if we should use this whole page to tell about it. The first idea will be the series of articles to begin in January by Associate Editor D. S. Burch, "The White Whirlpool," which will discuss the whole problem of producing and marketing milk from the milking pail to leaving the bottle at the door of the customer. It will be, we believe, the most interesting and dramatic series of articles that has ever been published by a farm paper.

IF your subscription is soon to expire, remember that Farm and Fireside has a fixed policy not to continue subscriptions after expiration. We established this policy because we want to send the paper only to those who want to receive it. So, please remember that in order to have the paper continue to come to you after your present subscription expires, you must send your renewal or must write us that you want us to continue the paper. Any reader whose subscription will not expire for some time can have his subscription extended in connection with this Christmas Present Offer commencing with the time it will expire.

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Send Fifty Cents, the regular one-year subscription price, and we will enter your subscription for two years, thus giving you two years for the price of one.

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What better Christmas present could you make to each of two friends than a year's subscription to Farm and Fireside—The National Farm Paper?

Remember that your order must be mailed on or before December 20th. And in closing we wish to state that we shall not repeat this subscription present offer in Farm and Fireside during the present subscription season and that probably we can never make such an offer to our Farm and Fireside family again.

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The FARMERS' LOBBY.



IN A GREAT and highly developed industry, the newest plants and methods are very likely to be the best. I am told by Americans who have studied the meat business in South America, among them Dr. Melvin, just lately returned from the southern continent, that this observation is illustrated in

the establishments that American companies have created in Argentina and Uruguay. Probably it is no overstatement of the facts to say that on the whole the finest packing and storage plants in the world are these in South America, partly because they are the last word in construction, arrangement and organization, and partly because the climate is milder than that in most of the American packing centers. This climate difference makes it possible to have more open construction, better ventilation, and generally better sanitary conditions at less cost.

Dr. Melvin knows physical conditions in packing plants as few men do. One of the objects of his trip to the South American meat countries was to learn the conditions under which meat is packed, the kind of inspection to which it is subjected, the precautions employed to insure against diseased animals being used, and in general what sort of products are being turned out.

AT THE time he went away, indeed, some misconception of the primary purposes of the trip was caused by an announcement that he was going to look into these aspects, and learn whether a source of meat supply could not be found for this country in the South American markets. The fact was that his purpose was not to hunt for meat to compete with ours, but rather to find out if there were any reasons why meat from Argentina and Uruguay should be barred, or subjected to special rigors of inspection at our ports. For the protection of our consuming public it was desired to make certain that countries sending meat thither should give it just as high and reliable a certificate of character as our federal inspection attaches to meat which we send to other countries. It would be illogical to ask more than that, because if we demanded more from Argentina than we ourselves do it would be a confession that we didn't think our own regulations were entirely satisfactory, and Germany, France, and other Continental countries might reasonably be suspicious.

But Dr. Melvin tells me that he found an excellent inspection and certification system in Argentina. It is modeled on the lines of our own, and was put into effect five or six years ago—very soon after our own law on the subject was adopted.

They have a national inspection of all meats intended for export, just as we have it for export and also for interstate-commerce meat. In addition to this the Argentine cities have local inspection—which also is very efficacious—of meats killed in municipal abattoirs for local consumption. At this point it must be said that South American cities are a long way in advance of our own, for almost all of them have municipal abattoirs—slaughtering and cooling plants owned and operated by the municipalities, where animals may be brought by whoever desires, killed for fixed fees, inspected, certified as having passed the inspection, and then sold either direct to the consumer or to dealers.

These municipal abattoirs represent a very important advance over conditions in this country. About all important cities in South America have them; Brazil, which is by no means an unimportant cattle country, has established them. Brazil has about 23,000,000 cattle and 21,000,000 people, which is a good deal bigger proportion of cattle than our own country can boast. The cattle, however, are not of very good quality, and will never be equal to those from temperate climates.

Dr. Melvin found the municipal abattoirs highly successful as instrumentalities for encouraging the production of meat animals in the immediate vicinity of the cities for the local trade. Our Department of Agriculture is determined on a campaign to encourage their construction throughout this country, especially in the East. It is believed that they would so greatly

How Will the Nation Expand Its Meat Production?

An Answer—By Judson C. Welliver

improve the market for Eastern farmers' stock that a great deal more of it would be raised. On this point, with some modest experience as a meat-raiser in the East, I decidedly agree with the Department view. Not long ago I was astonished to read in a live-stock and market paper an editorial scouting the idea that there is any section of this country where the farmer ever experiences difficulty finding a good steady and honest market for meat animals in which he can get all they are worth. There are just such sections, and they are tributary to the best meat markets in the country. The Midwestern farmer who can always sell at the nearest railroad town, by the carload or in small numbers, for quick shipment to the great packing points, has an immense advantage over the average Eastern farmer. Out West the daily quotation bears a very reliable relationship to the Chicago, Kansas City, Omaha, and Sioux City prices, because those markets are ready to absorb whatever is offered. In the East there are no adequate buying instrumentalities through which the small offerings of individual farmers can be quickly aggregated together for shipment to big market points. The market points themselves do not exist as they do in the West. Transportation facilities are not so good. Solid trainloads of double-deck hog and sheep cars are to be seen all the time on the Western railroads carrying stock to market. Who recollects such a spectacle on an Eastern road? We in the East see, not stock cars, but refrigerator cars, bringing our cities the finished products of the Western packing centers.

The municipal abattoir, it is now generally believed, would help supply Eastern cities with a local market of the kind that is needed for locally raised stuff. There are a few of these establishments in this country, generally successful. The Department is getting ready for a study of the whole problem of raising, marketing, transporting, and municipal killing in the East, and it is going to be a valuable work. The municipal abattoir could do business on a scale large enough to make possible some of the economies of by-product that are said to represent the profits of the "trust" packers. Dr. Melvin says that the municipal killing plants in the more important South American cities go in for these trimmings, though he did not think they handled all the parts of the animal so effectively as the big corporate packing establishments do. Horns, hoofs, blood, entrails, hair—these things are made up into their manifold products by the big South American concerns exactly as they are here. Fertilizer from these southern establishments is beginning to be used quite largely in our own Southern States. Some of it goes to Europe, some to Cuba; there is always market for it. The municipal abattoir of any considerable city in this country should be equipped with facilities for making up these by-products, otherwise it will be impossible to pay as good prices for animals as the Western concerns pay and as the Eastern stock-raiser must have in order to keep him in business.

ONE more aspect of this question of raising meat animals in the East. Argentina is almost the only "other" corn country of importance in the world. Right now Argentine corn is being shipped here in considerable quantities, and more of it will come during the winter. It is believed that this Argentine corn is destined to be a material factor in our Eastern market. If it does that it will be a further encouragement to raising and finishing meat animals in the East, where there is a good deal more land adapted for producing "rough stuff" than for turning out the corn to finish it. Only time and experience can demonstrate whether, as the Argentine meat business develops, that country will require all its corn to finish its own cattle. The fact remains that at present there is a surplus of Argentine corn; that some of it is coming to this country; that a string of shiploads of it are expected to come here before the coming winter is ended; and that the possibility of Argentine corn being attracted here whenever

prices reach a level that warrants importations will be, for a number of years at least, an

increasingly potential factor in the market for that cereal. These are facts about the American meat situation that may be construed by every man for himself. They are set down here simply for what they are worth as factors in the new situation that has been created in part by the increasing scarcity of meat, the higher prices, and the removal of tariff duties from both meat and corn.

For myself, I don't see much in all these things to worry the American farmer. All the surplus of either meat or corn that Argentina is likely to have in any future that we can comprehend is not going to disturb greatly the balance of forces in the world's markets. Some Argentine meat has come here, but there is nothing to justify the expectation that it will be a huge factor with us. There is for instance the question of transportation. Only one steamship line, Lamport & Holt, is running vessels direct from Argentine to American ports. It has five boats in the business. Aside from these, meat for our market must be shipped via Liverpool, which is expensive and requires more time. The Lamport & Holt people are making one sailing each week at present. If the business grows they will add more vessels. But it is reasonably plain that the American packers in Argentina are not going to bring their Argentine meat here to break down the market for their American meat. They will bring it when there is actual shortage and need for it.

THE real danger of South American meat injuring the American producer lies in the possibility that the Anglo-Argentine companies will be forced to fight back in kind against the American concerns. In the last letter to the Lobby we saw how the Americans fairly blasted their way to control of the Argentine trade with Europe by paying big prices for stock, increasing their shipments, and cutting prices in the European market. We saw them at the close of a very short campaign doing the big end of that business.

Suppose now—this suggestion comes to me from meat authorities who have studied the situation—the Anglo-Argentine people decide to come into the United States and fight our packers on their own ground? Suppose they invade New York, Boston, Philadelphia, Baltimore, and the rest of the Eastern coast cities, put up storage plants, establish retail markets, and go to fighting exactly as the American packers fought for the business in Europe? That is a very serious possibility, according to some well-informed people.

In such a competition would lie the first real possibility of an actual test of cheapness between the meats of the two countries. Swift & Co. of Chicago are not going to fight Swift & Co. of Buenos Aires for the control of Boston's market; but some other Buenos Aires firm, a rival of Swift's, might do just that. Then the American producer of meat would feel the effects, provided there was enough of the Argentine supply to make a real dent in the United States situation. With the prices and demand that now rule in European meat markets, it does not seem likely that this competition will be very grave.

Our own governmental view of the situation is indicated by the fact that the Department of Agriculture is giving as much attention as it possibly can to projects for increasing the production of meat here. There is not even a remote suspicion that a time is at hand when the meat problem will be solved by importations. The South, especially, is being pressed further to diversify its agriculture by introducing more stock-raising in place of cotton. The boll weevil is an effective ally of the Department in this campaign.

The Midwestern feeding country has been getting feeding stock from ranges that are fast ceasing to exist. That means that instead of buying its feeding cattle in the future, it must raise more and more of them. That is not impossible, but it requires a readjustment of live-stock methods, and Secretary Houston and his aids are devoting themselves to devise ways to bring the right methods into vogue. They do not expect, I gather, that the corn belt will increase its meat output much, but they do expect to get the East and South greatly to expand their meat production.



The Burden of Yesterday

By Adelaide Stedman

Illustrated by R. Emmett Owen



Synopsis of Preceding Chapters

Faith Hamilton, a young and beautiful teacher, has fallen in love with William Drake, who is guest at a house party where she, too, is a guest. Her host, Mr. Cumnock, has in the meantime fallen in love with her, and in a mood of exaltation, owing to her first appearance in the world outside of the schoolhouse, and also owing to depression because of the loss of her position in the school, she flirts with her host and alienates Drake by doing so. Finally, in the woods, Cumnock offers himself. Shocked, she runs away, and appears, disheveled, beside a launch in which Drake is sitting. He is troubled and antagonized by her appearance, but is forced to take her into the boat. Little by little he begins to understand the stress under which she has been, and to excuse her errors. His love for her rises up, and she is happy in the understanding of it, though no definite words are spoken. She does not know that he is held back by family complications, as he has dependent upon him his mother, his sister-in-law and her two children.

The daughter of Faith's host, Ernestine, is a great friend of Faith's, and a pupil of hers at the boarding school. Ernestine falls in love with the secretary of William Drake, a young man in whom Drake has the greatest confidence, but whom, as a boy, he rescued from the Juvenile Court, where he confessed to the charge of stealing three cream puffs. Ernestine confesses to her rich and very devoted father that she and Robert want to marry. Her father is not pleased, but says that he will inquire about the boy of Drake.

Chapter X.

ASLEEPLESS night brought no counsel to Drake. The only decision he reached was to leave without saying more to Faith. His man's pride rebelled against speaking of his marriage before he had a home to offer.

After breakfast he saw her sitting alone in the garden. Was she waiting for him? Did she care? The desire to know was torture. Her face had resumed its luminous sweetness; the utter womanliness which was her charm pervaded her like an atmosphere. Drake realized the limit of his strength. He must not see her alone; no matter how contemptible she thought him, to go as far as he had, to imply everything and then to run away. If he had made a faint impression on her heart hurt pride would heal the wound more quickly.

He held to his resolve, and only at the station, in the flurry of saying good-by, had a word with her.

"I've been very much disturbed about something. I can't explain now. Please let me know your address as soon as you get to New York."

Then he was obliged to rush to the train unanswerd by look or word.

When he reached home an hour later and Laura heard his voice in the hallway she braced herself and went white with anxiety. Had her scheme worked? She had taken days to write that letter, to appeal to William's generosity in the subtlest way. Had she succeeded?

Lying on her couch dressed in a soft China silk negligée, and wearing a lacy boudoir cap trimmed with baby roses and knots of ribbon, her pallor and her big blue eyes gained in pathetic value. As her brother-in-law's footsteps approached, she hastily called little Florence, whom she had kept close to her for the past week, and taking one of the child's hands, pressed it to her lips, while her face assumed a look of patient, martyr-like resignation.

Entering, Drake saw this picture, as she meant he should. Then she pretended to look up startled, sprang from her couch, and with a gesture of flying to refuge, against which no man is proof, threw herself into her brother-in-law's arms, trembling and sobbing with no assumed nervousness.

"Will! Will!" she wept. "I can't help it—I'll be—myself—presently. It's all right—I'm so ashamed to behave so!"

All of Drake's half-baked plans to consider himself for once vanished. He felt brutal, utterly unthinking, to have ever considered separating Laura from her child.

"Sh! Sh!" he soothed Laura, patting her shaking shoulders with hands that shook scarcely less. "No more nonsense! You're not going to leave this house! You're going to stay right here!"

Well as she knew his generosity, Laura had not expected so easy a victory. A rush of joy, relief and exultation turned her giddy, and she did the most effective thing possible by sinking faint and limp into her brother-in-law's embrace.

"Florence, call Grandma quick!" he ordered, carrying Laura to the couch.

An hour later they left Laura asleep and went into the living room. William relaxed in his chair. His eyes closed with weariness. The lines in his face sagged. His head and mind and body ached as if he had been pounded and beaten in a terrific struggle.

Suddenly he was conscious of being observed, and his eyes flew open. His mother put her trembling hand on his arm.

"William!" The word was a little moan. "What is it?"

He rose hastily, his armor on again.

"I'm just dead tired. Didn't sleep last night."

Her gaze still questioned him unsatisfied, and he went on wearily. "Of course Laura's attitude surprised me. But we can't blame her, Mother. She was perfectly willing to go, and is yet, but we can't allow her to! We just never thought. We were too busy with our own hopes and plans, but I guess we'll just have to forget them!"

"What hopes? What plans?"

Drake looked away quickly from his mother's penetrating eyes, so quickly that her already roused suspicions quickened.

"Oh, I'm just tired. I didn't know quite what I was saying!"

Putting together her infinitesimal evidence—a line in a letter, a word, a look—by some unexplainable process of intuition Mrs. Drake suddenly knew. Will, believing himself free, had fallen in love! A delirium of protest seized her. William must not be sacrificed! He must not be! She would prevent it somehow.

With a mumbled excuse she hurried upstairs to think.

Florence, seeing her, came tiptoeing out of Laura's room, one little finger pressed to her lips in token that her mother was still asleep.

At sight of the small bone of contention, a solution to William's problem suggested itself, which made her press the child close as if someone were trying to pull her away.

"She didn't take her in the first place on my account!" she whispered to herself accusingly.

She turned into her bedroom. Little Florence's photograph smiled at her from the mantel shelf. Some of the child's picture books lay on the table; a

elegant knit ties, and a five dollar sailor! But he ain't had the decency to ask me to have as much as a glass o' soda water, when he knows all my real gentlemen friends 'r out o' town, and I ain't had a breath o' air at one o' the beaches in three weeks!"

She complacently surveyed her lawn waist, cut almost low enough for a ball gown, and the Persian silk sash wound around her waist and knotted on the side after the prevailing fashion.

"He thinks he's gettin' too swell for me, but I'll put 'm in his place yet!"

Douglas suddenly swung around on his stool, announcing:

"He's a hundred dollars shy on his accounts."

The two looked at each other for a minute in silence.

Miss Fleming crossed to Douglas's desk. "Add the figgers up again. There must be a mistake."

"I've gone over them three times. Besides, I never make mistakes."

"N after all Mr. Drake's done for him!" the stenographer reflected morally, after another pause. "Y' can't make a silk purse out o' a sow's ear!"

"He thought he'd get my place soon," Mr. Douglas chuckled. "I've seen it in his face. Mr. Drake had better be glad he has one honorable man and an expert accountant in his office."

"Gee! Who'd a' believed it." Miss Fleming was overcome with astonishment again, after a minute's scrutiny of the damning figures. "This'll break Mr. Drake all up, and he looks bad enough already!"

Harold Douglas, his face bent over his books again, gave a satisfied little smile. All summer the fear of

losing his position had haunted him, for in his heart he knew that Robert was more than qualified to fill it and do many other things besides. His quick nervous temperament magnified his worries. The daily trip in the hot suburban trains irritated him. The milk in New Rochelle had been bad for several months. The newest baby ailing, and necessitating all night vigils. Through some curious process of reasoning Douglas laid all of these annoyances at Robert's door. The boy's attractive personality and quick grasp of affairs were a constant rebuke to his narrow, technical mind and unprepossessing manner. Now his self-righteousness and good opinion of himself returned.

"Once a criminal, always a criminal," Douglas remarked unctuously.

The door opened and Robert walked in, returning from lunch. He sank into the chair at his desk and began moodily running his fingers through the accumulated papers, not attempting to examine them.

Miss Fleming and Douglas observed him for a few moments, then their eyes met significantly. The chief clerk swelled his breast pompously, then walked over to Robert's desk and laid the condemning budget before him.

"I've audited your accounts."

"Thanks!" The boy did not look up.

"You're a hundred dollars short!"

"What?" Robert sprang to his feet, instantly galvanized into action by the man's tone more than his words. "You're mistaken!"

"I haven't made an error in fifteen years."

"Well, you've made one now!" The boy began hastily to run over the figures, mumbling to himself.

"My, but that's a handsome tie you got on." Miss Fleming observed presently. "It must o' cost like fun!"

Robert looked up and caught her sneering expression and the chief clerk's smug grin. Suddenly their suspicion came to him. He turned crimson.

Mr. Drake's bell rang, but such was the repressed excitement nobody heard it. Presently Mr. Drake himself appeared at the door.

"Robert, why didn't you answer my bell? That's the third time this has happened in a week."

Douglas stepped forward officiously.

"Here are the month's balance sheets, sir. Robert is a hundred dollars short."

"You must be wrong, Douglas! Robert! Go into my office."

He waited until he was obeyed before speaking again.

"When you have discovered your mistake, Douglas, you will apologize to Mr. Lewis." Then he followed Robert. The boy was sitting in the same position he had assumed outside.

The man was shaken to his depths. Robert had been unlike himself for the entire week. He had neglected his work, been tardy and subject to moods. What was wrong? This thing could not be true. Robert had not slipped back. It wasn't possible! And yet—Why didn't he deny the charge? Why didn't he—

"Robert, look at me!" The words sprang out as a kind of imploring command.

"Sir?"

"Look at me!"

Their eyes met—held—steadily.

"Thank God!" Suddenly Drake's hands went out and bit into the flesh of the boy's shoulders in the strength of his caress. "It's all right now. Sit down and tell me about it." [CONTINUED IN NEXT ISSUE]



Robert sprang to his feet—"You're mistaken!"

pile of her brief stockings, neatly darned, filled the work basket; a handkerchief case, sewed with big uneven stitches by her awkward little fingers, had the place of honor on the bureau.

Mrs. Drake went straight to her desk and took out pen and paper, her head shaking with nervous ineptness. Her spectacles dimmed with tears, but she smiled, on her face a look of genuine mother love her daughter-in-law could never copy.

After his long years of renunciation, Will should have his happiness. She was going to ask Jobyua Price to take little Florence—her all! What difference if she suffered more keenly than Laura ever could. Someone had to make the sacrifice. Laura wouldn't, so she must.

Chapter XI.

"GEE," yawned Pearl Fleming, Drake's stenographer, on the torrid Monday following her employer's return. "this weather's fierce! Close the windows, will you, Mr. Douglas? They let in more heat 'n air."

"Can't stop for a few minutes," muttered Douglas in his usual curt manner. "I'm just auditing Robert's accounts."

"I'd like to see his personal bills these days," the young lady observed scornfully. "Silk negligée shirts,

Sunday Reading

By Merle Hutchinson

A True Family

THE very first thought that comes to mind about a home is that it should be pleasant. If it does not make its people happy, then it will fail in all else, and it takes everyone in it to make everyone in it happy. There is one picture I shall never forget that gave in a flash the whole spirit of a home I know beside a winding river. It is a very plain farmhouse, and there are many needs within its walls, but kindness and fun never fail there.

It was after supper, and the big brother was stretched comfortably where he could see the yellow sunset light stretching across the level fields to the water. He was weary from a long day under the summer sun, but the two little boys coming confidently out of the door, each with a tiny drum, didn't know that. All they knew was that he was giving them lessons and this was his leisure hour. He looked at them reluctantly an instant, and then, sitting upright, all attention, he began to beat time. The two little fellows, standing straight and serious, rolled out their rat-tat-tat upon the quiet of the evening. Gravely he criticized and made them try again and yet again, and then the lesson finished as usual with his bringing out the precious big drum, that had beaten the march for many men, and sending its rousing notes far up and down the valley, till they struck against the hills and were echoed back to the delighted children. Back went the drums to their places in the hall, and off to bed went the youngsters, content, leaving the tired big brother in the hammock also content.

The Siege of Jericho

Sunday-school lesson for December 7th: Joshua 6, 8-11; 14-20.
Golden Text: All things are possible to him that believeth.

THE walled town of Jericho was the key to Palestine. It commanded the two passes leading northward and southward into the heart of the country. Two streams set round its hill a wide fertile plain, where spread fields of ripening grain, and where the wonderful forest of palm trees swept seven miles toward the Jordan. The palm, common in the Canaan of those days, has now practically disappeared. Within a hundred years a solitary specimen stood near the ruins of Jericho. In the seventh, the twelfth and even in the seventeenth centuries there were descriptions by travelers of the remains of the great grove, and still the Dead Sea casts up trunks and branches that have been preserved in its heavy waters one cannot say how long. But to-day only miles of tangled bushes make green acres in the surrounding waste and tell of the fertility and beauty for which the plain of Jericho was once famed. Every lumberman and clearer of land in the United States should be sent to Palestine before beginning his work, there to see what happens to a country whose forests are felled and not replanted! From a height not far from the Jordan the Hebrews could overlook the miles of green to the hill city, and beyond to the bounding mountains of white limestone. A lovely prospect it was, but to the invaders it must have held a serious meaning. No machines of war had they with which to batter down fortifications. By length of siege alone could they conquer, and their general ranged his army closely about the city, till it was "straightly shut up, and none went out and none came in."

The Captain of the Host of the Lord

There is a wonderful vividness in the account of Joshua's vision. He was evidently about his daily tasks in the carrying out of what was to be a long and trying work, when, "as he was by Jericho, he lifted up his eyes and behold there stood a man with his sword drawn in his hand." "Art thou for us or for our adversaries?" demanded the soldier, and then he received the strange orders for the closing scenes of the siege. Absolutely, unquestioningly, the commands were obeyed. Whether, as many hold, the walls of Jericho fell from one of the earthquake shocks common to the region or, as the besiegers believed, at the direct command of God, there is no doubt of the effect of the event. For six days in silence, save for the blowing of the trumpets of jubilee, they were to march once with the Ark in their midst about the walls, and on the seventh seven times. The warriors of the town, looking out helplessly upon this extraordinary spectacle, must have recalled with sinking hearts the wonderful

tales that had heralded the approach of these strangers. What could such a method of warfare betoken but the influence of some unknown power, fighting with weapons they could not meet? There is something, on the other hand, that thrills the blood in this magnificent obedience of the Hebrew host. To obey an order for daring action is difficult enough, but to obey through seven long days of silent, seemingly futile marching shows a control truly marvelous. What the sudden victory meant to them is best told by one of their own poets, hundreds of years later.

For they got not the land in possession
By their own sword.
Neither did their own arm save them:
But Thy right hand and Thine arm,
And the light of Thy countenance.

On Second Thought

By E. R. Sill

Epworth League topic for December 7th:
Has God a plan for my life?

THE end is so near;
It is all one
What track I steer,
What work's begun,
It is all one
If nothing's done,
The end's so near!

The end's so near,
It is all one
What track thou steer,
What work's begun—
Some deed, some plan,
As thou'rt a man!
The end's so near!

The Weakest Link

Sunday-school lesson for December 14th:
Joshua 7, 6-15.
Golden Text: Be sure your sin will find you out.

THE warfare waged by the Hebrews seems little more merciful than that of their contemporaries. They slew their enemies without quarter, and annihilated whole cities, men, women and children. They knew little of humanity beyond the limits of their own tribes. They were far beyond their neighbors in ideals, in laws, but the gentler virtues were yet far from them. The extermination of the peoples within the borders of Palestine, however, has this explanation, although to these later and better days it is yet no excuse. The various nations inhabiting this narrow strip of western Asia were a degraded people. From the point of view of that time, their destruction was imperative to the very existence of the Hebrew race, and of the Hebrew faith. To kill them was a religious duty. The Hebrews were as sure of this necessity as are many people to-day of the necessity of segregation or of the restriction of immigration for the preservation of the Anglo-Saxon type.

The Mission of the Nation

The religious character of the invasion of Canaan is emphasized throughout the history, but nowhere more definitely than in the story of Achan. No spoils of war were to reward the victors at Jericho. Gold and silver and vessels of brass and iron were to be saved for the tabernacle service, and for the support of the priesthood. All else, whatsoever, was to be utterly destroyed. The Hebrews were to form a religious state. They were to win a home, but not riches. How deeply imbued with this aim and with a sense of its requirements was the whole people one sees from the fact that only one transgressed the command. Before a simple, pastoral people were suddenly spread jewels, gold, silver, embroideries, silks; all the beauty and wealth and luxury of an oriental city. Achan alone yielded, secreting a little silver, a wedge of gold and what Wycliffe's Bible calls a "red mantle full good."

The moral teaching of the scriptures is tonic in its absolute directness. The wavering principles of Master Worldly-Wiseman find no place in its pages. Neither the importance of a man nor the smallness in itself of an event can hide the essential quality of any act. We are never allowed to forget that the smallest disobedience, the least swerving from honesty, the slightest fear, bears in itself the germ of the soul's death. Achan's theft of what had been devoted to destruction or sanctified to the temple service poisoned the whole people. Till the sin was rejected disaster would follow them. Stern though the judgment seem, stern it needs must be, since no man liveth to himself. Should this thief go unpunished, should his spirit spread, instead of a disciplined, self-controlled nation, there would shortly be but a horde of greedy plunderers, ravaging the land, quarreling among themselves and finally merging into the barbarous population that they were to have overthrown. There is no truer lesson in practical government than this story of ancient days.



The very thing!

A KODAK

The Christmas gift that will appeal to every member of the family—will add to the joy of the Christmas day in the pleasure of picture taking and will perpetuate that day by preserving its memories.

KODAKS, \$5.00 and up.

BROWNIE CAMERAS, (They work like Kodaks) \$1.00 to \$12.00.

Catalogue free at your dealers or by mail.

EASTMAN KODAK CO., 382 State St., ROCHESTER, N. Y.

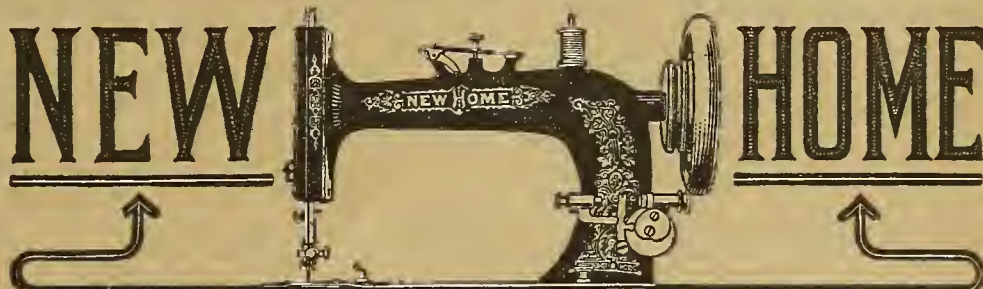
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To advertise our business, make new friends and introduce our big catalogue of Elgin watches we will send this elegant watch postpaid for only 98 cents. Gent's size, high grade gold plate finish, lever escapement, stem wind and stem set, accurate time keeper, fully Guaranteed for 5 Years. Send 98 cents today and watch will be sent by return mail. Satisfaction guaranteed or money refunded. ARNOLD WATCH CO., Dept. 1252, CHICAGO, ILL.



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Known the world over for its Serving Qualities.

The only Sewing Machine which is a life asset at the price you pay. Purchase the NEW HOME and you will not have an endless chain of repairs. It is better made, does nicer sewing, easier to operate, and more silent than any other. Guaranteed for all time. Write THE NEW HOME SEWING MACHINE CO., Orange, Mass. for booklet H

The Youth's Companion

Is the Best
Christmas Gift

Improved and broadened in its scope. Enlarged by the addition of a Special Family Page, Boys' Page, Girls' Page and Children's Page. Great serial stories, 250 short stories. A remarkable Editorial Page. Current Events and Science. A wealth of variety and quality, and all of it the best.

Our Christmas Offer

Cut this out and send it with \$2.00 for The Companion for 1914, and we will send also this year's Christmas Number and the Home Calendar for 1914. ED85 THE YOUTH'S COMPANION, BOSTON, MASS.



Remember—52 Times a Year, not 12

WIFE WON Husband Finally Convinced

Some people are wise enough to try new foods and beverages and then generous enough to give others the benefit of their experience. A wife writes:

"No slave in chains, it seemed to me, was more helpless than I, a coffee captive. Yet there were innumerable warnings—waking from a troubled sleep with a feeling of suffocation, at times dizzy and out of breath, attacks of palpitation of the heart that frightened me.

(Tea is just as injurious as coffee because it contains caffeine, the same drug found in coffee.)

"At last my nervous system was so disarranged that my physician ordered 'no more coffee.' I capitulated.

"Determined to give Postum a fair trial, I prepared it according to directions on the pkg., obtaining a dark brown liquid with a rich snappy flavour similar to coffee. When cream and sugar were added, it was not only good but delicious.

"Noting its beneficial effects in me the rest of the family adopted it—all except my husband, who would not admit that coffee hurt him. Several weeks elapsed during which I drank Postum two or three times a day, when, to my surprise, my husband said: 'I have decided to drink Postum. Your improvement is so apparent—you have such fine color—that I propose to give credit where credit is due.' And now we are coffee-slaves no longer."

Name given by Postum Co., Battle Creek, Mich. Read "The Road to Wellville," in pkgs.

Postum now comes in two forms:

Regular Postum—must be boiled.

Instant Postum is a soluble powder. A teaspoonful dissolves quickly in a cup of hot water and, with cream and sugar, makes a delicious beverage instantly. Grocers sell both kinds.

"There's a Reason" for Postum.

Save \$5 to \$23

Factory Prices—Freight Paid—One Year's Trial




Gold Coin
Stoves and Ranges

Buy direct from factory and get a better stove for less money. Freight prepaid—stove comes all polished, ready to set up. Use it one year—if you aren't satisfied we refund your money.


Write for Catalog and Prices. Big Free Catalog shows why improved features of Gold Coin Stoves make them fuel-savers and splendid bakers—why they have given satisfaction for 53 years.

Gold Coin Stove Co., 8 Oak St., Troy, N.Y.



Big Entertainer 163 Parlor Games, 310 Jokes and Riddles, 73 Tricks, 15 Card Tricks, 4 Comic Recitations, 3 Monologues, Checkers, Chess, Dominoes, Fox and Geese, 9 Men Morris. All 10 CENTS POST PAID.

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The Most Wonderful Imitators in the World! GOLDEN OPERA SINGERS (name copyrighted). Trained in Germany to sing the most beautiful melody. EVEN MORE WONDERFUL THAN THE TALKING MACHINE. They cost little more than an ordinary canary—give ten times the pleasure. A constant delight for the whole family. Sold on

TWO WEEKS' FREE TRIAL

with an ABSOLUTE GUARANTEE OF SATISFACTION. Your money back without question if not satisfied. Send for our free book that tells what they can do, how they are trained and how we ship them all over the world. Write today.

Cugley & Mullen Co., 1298 Market St., Philadelphia
(The Largest Bird Store in the World)

Guaranteed Talking Parrots as low as \$5.00.

Xmas 1913

Shirley President Suspenders

50¢

"A pair for every suit" makes a man's whole year happy. Try it and see! In beautiful gift boxes—12 different pictures. At stores or postpaid, 50c.

"Satisfaction or money back" Be sure "Shirley President" is on buckles The C.A. Edgarton Mfg. Co., Shirley, Mass.

More Ways to Make Presents

Painted Sachets

The cluster of dainty sachets illustrated is unique in the touch of handwork added to each tiny silken bag. Taffeta silk ribbon is very effective and takes water colors readily. Four-inch ribbon is an economical width, a two-inch piece making one tiny bag.

The old-fashioned yellow rose (a half-opened flower and stem, a full-blown blossom and green leaves, and three tiny buds and stems) was used as the motif on very pale lavender, the blue forget-me-not on cream white, the pink wild rose on sky blue, the daisy on pale pink, the violet on pale yellow, a deep rose on pale green.

Each sachet has its gilt safety pin attached, and narrow baby ribbon runs through the several pins and holds them in place with a dainty bow.

SOMETHING NEW—The

quaint hat hanger of lace and ribbon will please even the most practical, for, in spite of its daintiness and fluffiness, it helps the largest hat to occupy the smallest possible space in one's wardrobe. The hook of the hanger rests upon the closet hook against the wall. The crown of the hat rests upon the heart-shaped wire, thus bringing the under part of the hat parallel with but not quite touching the wall. Even a very flat wardrobe closet will not be too narrow for a large hat.

The frame measures twelve inches in length, plus the one-and-one-half-inch hook at the top, and at the bottom the three-inch extension piece from which the five-and-one-half-inch upright heart extends.

Materials required, six yards of one-half-inch satin ribbon and two and one-quarter yards of one-half-inch Val. lace.

Cut the lace into three pieces. Cut three twenty-seven-inch pieces of ribbon; sew them together triangularly, one eighth of an inch from their edges, using the running stitch and at the same time including in your stitches the lace edge.

When this triangular casing is finished, slip it over the body of the hanger. Tighten the heart with ribbon, fastening securely at the end. Cut the remainder of the ribbon into three pieces, and tie three many-looped bows, one at the end of the hook, one at the top and one at the base of the heart. It will be wise to explain the purpose of this unusual gift, lest your friend use it merely as an ornament and miss its real use.

EMMA L. H. ROWE.

Linen Table Runner

The eyelet and French embroidery design is simple, filling in the spaces along the border. This is a very satisfactory arrangement, as it leaves the work where it shows to the best advantage when the table is set.

With the Mexican work I prefer the embroidery worked flat; that is, without padding. Use a soft mercerized cotton not too fine, and work on a slant. This work is done best in a frame to prevent drawing. If you care to do the drawn work shrink the linen and also the thread before using.

H. KAUFMAN.

Basket of Rosebuds

In making this dainty gift one can draw much from her own ingenuity. The basket may be of any shape or size. The one illustrated was painted with ivory enamel. Fill basket solid with sheet moss, ten cents' worth for a medium-sized basket is enough. For the rosebuds the essential materials are, five-inch satin ribbon, No. 1½ stem-

green satin ribbon, heavy wire for the stems and fine uncovered wire for tying. The quantity of ribbon required depends on the size of your basket. The model illustrated is a boat-shaped basket ten inches long. For this I have used two dozen buds and one bunch of artificial rose foliage. For the larger buds I used one and one-half inches of ribbon cut on the bias, and for the smaller ones one inch each. It requires not over one yard of ribbon for all these buds. Use small pieces of ribbon that have fallen off your bows.

Cut four inches of the heavy wire, and turn the top end over. Cut your ribbon bias, folding the cut edges together. Turn the right-hand point over to the front a little past the selvage. Crush around the wire, folding softly; tie tight with the fine wire, wrapping several times. Clip the

end, and fasten both ends together secretly. With the narrow stem ribbon start as close to the bud as possible, and wind tight until the heavy wire is covered. With a little practice these buds are quickly and easily made. They may be all of one color or of a variety of colors. The model has two shades of pink, one each of cardinal, light blue, lilac, mais and white.

H. KAUFMAN.

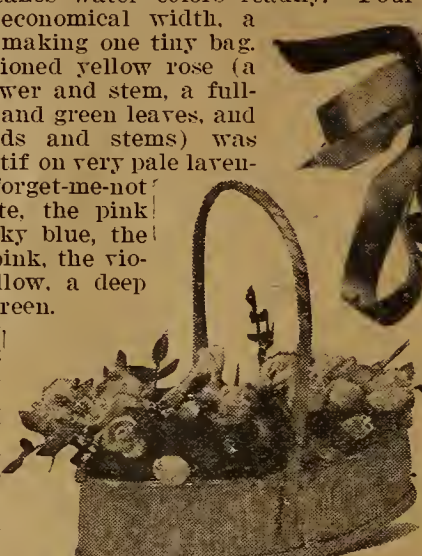
Dainty Candle Shade

These dainty shades are most acceptable gifts. The materials used may vary. The covering can be of any sheer material, silkoline, swiss or China silk. It requires ¼ of a yard of 36-inch material. The wire is the covered hat wire, which can be purchased at the milliners or notion departments. It requires 3½ yards and ¾ of a yard of 2-inch-wide fringe to match the covering. A pair of wire nippers are very handy in cutting the wire, but it can be managed without. Cut 9 pieces of wire, each 7 inches long. Of one piece fasten the ends to form a circle; to this at even spaces fasten the other eight pieces. Cut one piece of wire 18 inches long; form this into a circle. Measure 2 inches

from the first circle on each of the 8 wires and bend downward, then place your 2d circle and bend all 8 wires around this. Cut 1 piece of wire 20 inches long and form a circle. Measure 2¼ inches on each wire and bend over 3d circle as for 2d. Cut 1 wire 24 inches long and form a circle. Fasten the ends of each wire

to this circle, completing the frame. These frames can be purchased, but are expensive. These measurements make the largest sized shade for a candle; smaller ones are made in proportion. With thin white material cut in narrow strips cover the 1st, 2d and 4th circles. This gives a firmer foundation to sew through. Use the 9 inches of covering material. Should this be less than 36 inches wide a seam can be run in, as it does not show in the shirring. Turn ¼-inch hem and shirr with small stitches. Sew this secretly to the 1st circle, even the gathers and shirr just above the 2d circle, then tack to it. Turn the last edge over the 4th circle and sew firmly. For decorating many little ideas can be utilized; the one illustrated is of No. 1½ satin ribbon shirred through the center with small stitches forming a quilling. Sew this over the 2d circle. Quarter and mark with pins the 2d and 4th circles, having each pin on the 2d circle midway between each pin on the 4th circle. Sew the quilling diagonally from pin to pin. Finish the lower edge with fringe. If used for library or den the deeper shades of red, green or tans are very good. For decorating the Christmas dinner table they would be very effective of red with the green trimmings or of plain red.

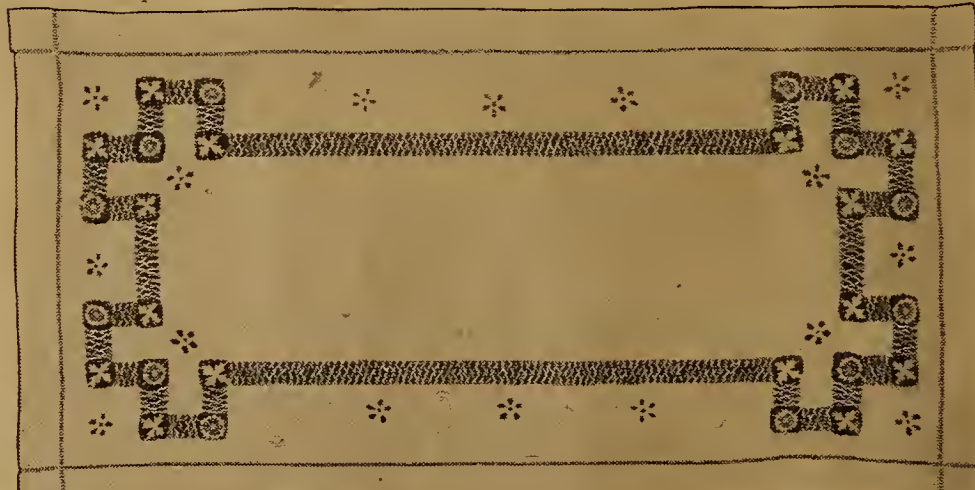
H. KAUFMAN.



Basket of rosebuds



Quaint hat hanger



Linen table runner



Candle shade

New Styles in Separate Skirts

And Costumes Specially Suited to Mid-Season Wear

(Designs by Grace Margaret Gould)



No. 2372—Misses' Cossack Blouse:
Side Closing

12 to 18 years. Quantity of material required for 14 years, three and seven-eighths yards of twenty-two-inch material, with three fourths of a yard of twenty-seven-inch contrasting material in a dark tone for collar, cuffs and tie. The price of this pattern is ten cents



No. 2326—Misses' Three-Piece Skirt:
Side Closing

12 to 18 years. Quantity of material required for 14 years, four yards of twenty-two-inch material, or two and one-eighth yards of thirty-six-inch material. Price of pattern, ten cents

No. 2394—Cutaway Coat with Raglan
Sleeves

32 to 46 bust. Material for 36-inch bust, six yards of thirty-six-inch material, or four yards of fifty-four-inch material, with five eighths of a yard of contrasting material. The price of this pattern is ten cents



No. 2394



No. 2425
No. 2359

No. 2389—Misses' Waist in Mandarin
Effect

14 to 18 years. Price of pattern, ten cents

No. 2390—Misses' Skirt with Side
Drapery

14 to 18 years. Price of pattern, ten cents

No. 2425—Waist with Mandarin
Sleeves

32 to 42 bust. Price of pattern, ten cents

No. 2359—Three-Piece Skirt: Tunic
Effect

22 to 32 waist. Price of pattern, ten cents



No. 2423
No. 2424



No. 2372
No. 2326

No. 2423—Surplice Kimono
Waist with Vest

32 to 42 bust. Material for 36-inch bust, one and one-half yards of forty-eight-inch and seven-eighths yard of thirty-six-inch contrasting material for the vest, collar and cuffs. The price of this pattern is ten cents

No. 2424—Skirt with Drapery:
Front Closing

22 to 32 waist. Material for 24-inch waist, three yards of forty-eight-inch, two and one-half yards thirty-six-inch contrasting material. Width in 24-inch waist, one and three-fourths yards. Price of this pattern, ten cents



No. 2335



No. 2394

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PATTERN COUPON

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send me the following patterns:

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No. 2371



No. 2425
No. 2359



No. 2371



No. 2363



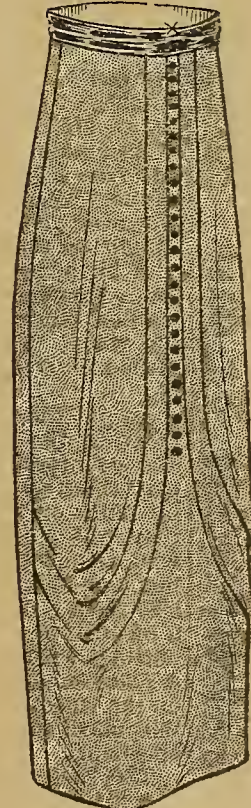
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No. 2335



No. 2350



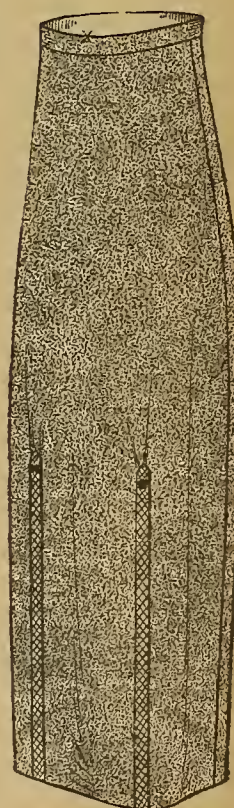
No. 2350



No. 2389
No. 2390



No. 2367



No. 2367

No. 2371—Skirt with Yoke at
Back

22 to 30 waist. Material for 24-inch waist, two and seven-eighths yards of thirty-six-inch material, or two and one-eighth yards of fifty-four-inch material. Width in 24-inch waist, two yards. Price of this pattern is ten cents

No. 2363—Skirt with Draped
Front Tunic

22 to 34 waist. Material for 24-inch waist, four and one-fourth yards of thirty-six-inch material, or three yards of fifty-four-inch material. Width in 24-inch waist, two yards. The price of this skirt pattern is ten cents

No. 2335—Slashed Four-Piece
Skirt

22 to 34 waist. Material for 24-inch waist, five yards of twenty-seven-inch material. The width of this skirt in 24-inch waist is one and three-fourths yards. This skirt may be made with or without the slash. Pattern, ten cents

No. 2350—Two-Piece Skirt:
Draped Front

22 to 34 waist. Material for 24-inch waist, five and one-fourth yards of twenty-seven-inch material, or two and three-fourths yards of forty-eight-inch material. Width, two and one-half yards. Price of pattern, ten cents

No. 2367—Three-Piece Skirt:
Plaits in Front

22 to 34 waist. Material for 24-inch waist, two and one-eighth yards of fifty-four-inch material. The width of this skirt at bottom in 24-inch waist is one and three-fourths yards. The price of this pattern is ten cents

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That's the name
of the beautiful
girl on the

Coca-Cola

1914
Calendar
(Size, 13 X 32 inches)

Send your name and address and a 2c stamp (it pays part of the postage) and we'll send you Free and postpaid this beautifully lithographed and perfect reproduction of the oil painting "Betty," painted especially for us. 1914 calendar is attached.

FREE
Coca-Cola booklet enclosed.
THE COCA-COLA CO.
Atlanta, Ga.

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AGENTS 100% Profit

Wonderful new shoescraper and cleaner. Cleans dust as well as mud. Sells the year round. Needed on every doorstep. Enormous seller. W. A. Parker sold 92 in 4 1/2 days—Profit \$10 a day. Write quick for territory and terms and free sample to workers.

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Beacon Burner FREE

TO TRY 7 DAYS IN YOUR OWN HOME
FITS YOUR OLD LAMP

100 Candlepower Incandescent
Pure white light from (kerosene) coal oil. Beats either gas or electricity.

Costs Only 1 Cent for 6 Hours

We want one person in each locality to whom we can refer new customers. Take advantage of our Special Offer to secure a Beacon Burner FREE. Write today. AGENTS WANTED.

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AGENTS AT LAST—A Safe Self-Heating Iron

The only **KEROSENE** (coal oil) iron in the world

No competition. Every woman wants a safe self-heating iron. Low priced; every home can afford it. Demand perfectly enormous. Big profits. A winner for agents. Write quick for terms while your territory is still open.

Sample FREE to Workers

THOMAS IRON CO., 548 Lane Street, Dayton, O.

A PERFECT LIGHT

Ninety-five per cent of fuel required is ordinary air, costing nothing. Beautiful white light of 400 candle power. Our 15 year experience is your guarantee that this lamp is perfect. Write for circulars and prices. Agents Wanted.

AMERICAN GAS MACHINE CO.
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WHITE FLAME

BURNERS make your old kerosene lamps and lanterns give a brilliant white light better than electricity or gas. Doubles your light. Saves oil. NO MANTLE TO BREAK. Guaranteed Safe and Reliable. Delights every user. Send now for complete sample postpaid 35 cts., stamps or coin. 3 for \$1. MONEY BACK IF NOT SATISFACTORY. LIVE REPRESENTATIVE WANTED. EXCLUSIVE TERRITORY. WHITE FLAME LIGHT CO. 58 Clark Bldg., Grand Rapids, Mich.

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I Trust You Ten Days. Send No Money

32 Hair Switch on Approval. Choice natural wavy or straight hair. Send lock of hair and I will mail a 22-inch, short stem, fine human hair switch to match. A big bargain. Remit \$2 in ten days or sell 3 and GET YOUR OWN SWITCH. Extra shades a little more. Enclose postage. Write today for free beauty book of latest styles in hair dressing, high grade switches, puffs, wigs, pompadours, and special bargains in Ostich Feathers. **WOMEN AGENTS WANTED.** ANNA AYERS, Dept. B473, 220 S. State St., Chicago

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Forty-eight specimen lesson pages sent free to all inquirers

The Chautauqua School of Nursing
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Children's Carpentry

Designs by A. E. Swoyer



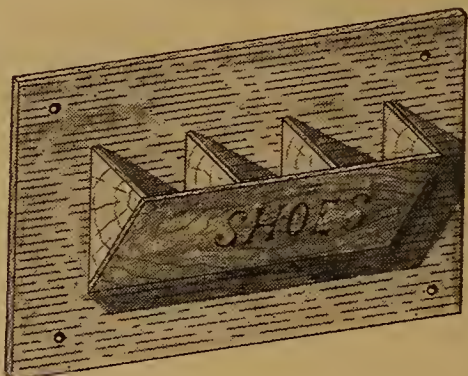
A Shoe Rack for Mother

IT'S a pretty hard thing to find out what mothers want for Christmas, but it is sure that whatever you make for Mother with your own hands will have more value to her than anything which you could buy in the stores; if you can make something which she will use every day, so much the better—it makes Christmas last that much longer! Among such things the shoe rack shown in the drawing should have high rank; it is not only very easy to make, but it will provide a place for Mother's good shoes where they are not always under foot or being scratched and marred by heavy boots.

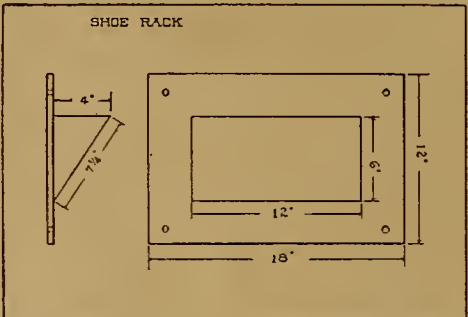
If you want to spend a little money and are in reach of a sawmill, buy either cypress or quartered oak of which to make the rack; if not, pick out a piece of yellow pine with as pretty a grain as you can find—if it is properly stained and finished it will make a very pretty piece of furniture.

From the wood, which should be one-half-inch stuff, cut a piece for the back board eighteen inches long and twelve inches wide; another piece, twelve inches long and seven and one-half inches wide, is for the front of the rack and must be beveled on one edge with a plane. Next cut two pieces six inches long and four inches wide, and saw them in half diagonally; this will give you the four triangular-shaped partitions for the rack.

As it is a little hard to work the stain into the corners of the completed rack, it



is best to stain the parts before putting it together. The smallest bottle of stain that you can buy will cost about thirty-



five cents and will be enough to finish a number of pieces as large as the one you are making; if you write to some of the firms making such things they will send you free a sample of both stain and finishing wax, enough of each for the rack. However you obtain it, the color may be spread on the wood with either a brush or a bit of soft cloth, allowed to soak in for a moment and then wiped off. This method tends to bring out the grain of the wood. The piece may then be varnished or treated with wax well rubbed in.

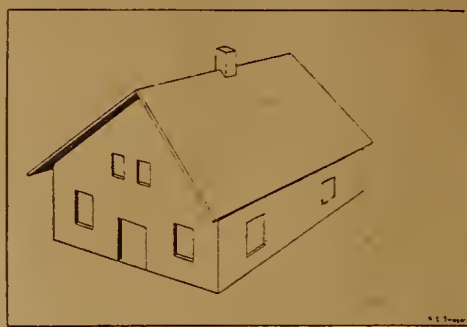
To put the rack together, first nail the front to the partitions, using fine nails and countersinking the heads; the rack may then be fastened to the back board by nails or screws driven in from the rear; the piece is then complete. If you wish to add the lettering, the best way to manage is to cut the letters of proper size from a newspaper and paste them to a piece of heavy cardboard; cut out their outlines with a sharp knife, and you have a ready-made stencil which, when placed on the wood and brushed over with paint, will mark the letters evenly and without smearing.

The rack is intended to be screwed to the inside of the closet door, and thus placed will prove a daily convenience.

A Simple Doll's House

THERE is probably nothing which little sister would appreciate more for Christmas than a well-made doll's house, nor is such a thing at all difficult to make. Heavy cardboard may be used as the material, but it is neither so strong nor so easily worked as wood, so that the latter is to be preferred, even if it increases the weight of the "man-

sion," which may often change location. The wood to be used should be thin white pine about one quarter of an inch thick; pieces taken from old dry-goods boxes such as the storekeeper will be glad to give you, particularly if you tell him what you want them for, are just the thing. You should select pieces of straight grain and free from knots; if



they are at all rough either plane them down or work them smooth with sandpaper.

The body of the house should be made first, and for this you will have to cut two sides, each seventeen and one-half inches long by six inches high, and a bottom board seventeen and one-half inches by eleven and one-half inches—the latter may be of heavier wood, if you have it. For the front and back of the house cut two twelve-inch squares of wood, and draw a line across center of each; mark the middle of the top side of each piece, and draw from the ends of the first line to this point. When you saw along the lines last drawn you will form ends as shown in the sketch, the lower part of which forms the "first story" walls, and the upper portion takes care of the pitch for the roof.

The partitions which divide the house into four rooms—parlor, kitchen, dining room and bed chamber—are made in two pieces, each of which has a slot cut in the middle of the same width as the thickness of the other piece and half as deep as the piece is wide; this allows one to slip over the other, as shown. One piece should be seventeen and one-half inches long, the other eleven and one-half inches, and both are six inches wide.

Next cut the windows in the sides, and the door and windows in the front, using chisel or jackknife, and the body of the house is ready to be put together. For this use thin wire nails with small heads, and sink them well beneath the surface either by means of a larger nail or a regular countersink.

For the roof cut two pieces—one nine inches wide, and the other eight and three-quarters inches, both twenty inches long—and nail them together along one edge as shown; be sure to nail the wider piece to the narrower, instead of the other way around. Next make a little block—say one inch square and two inches long, although the exact size is not important—and notch it out at the bottom so that it will fit snugly over the peak of the roof, where it is fastened with wire nails. The roof is not fastened to the body of the house, as sister will want to lift it off in order to put her family inside; it simply rests upon the frame, the "chimney" serving as a handle, by means of which it may be lifted.

The carpenter work on the house is now complete, but painting is so little work and improves it so much that it is worth doing. If you have paints and a brush, so much the better; if you haven't, buy a ten-cent can of white color and a

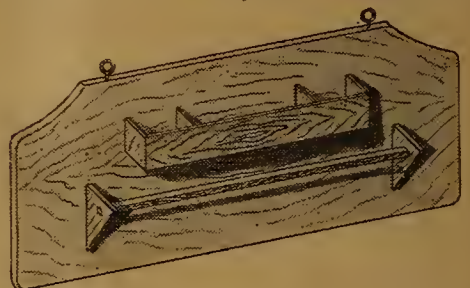
five-cent brush. This is all the money that you have to spend on the house, and if you don't believe that you are building very cheaply ask your father!

Go all over the house, except the roof and chimney, with the white paint, spreading it as evenly as possible; when it has dried thoroughly, put on another coat. Then take part of the paint that is left and put it in another dish, adding lampblack or soot to it until it is a dark gray in color; stir this in well, and paint the roof and chimney. If you want a really handsome house, carefully run a stripe of this gray around all the edges, as well as the doors and windows.

Perhaps all this sounds as if the house were hard to make; it really is easier to do it than it is to tell you how. The whole thing should not take more than a couple of hours. You will find little sister's smile on Christmas morning when she sees her house pretty good pay for having missed a game or so of "Three Old Cat."

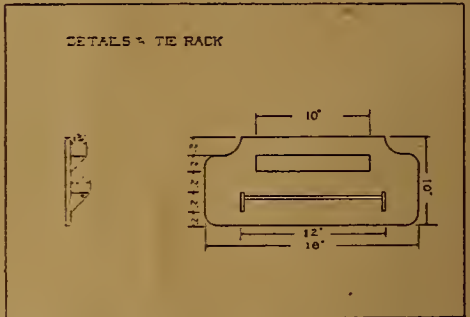
Making Father a "Catchall"

WHILE Mother usually has many little boxes and dishes on the bureau to hold her various small belongings, poor Father's neckties, collar buttons and stickpins are usually tucked away in the corner of some drawer or otherwise so disposed of that he has to waste both his time and temper whenever he is forced to hunt for them. This being the case, he ought to be very grateful to the maker of any "catchall" designed to hold his prop-



erty, and his alone, and to welcome it as the most desirable and appropriate of all Christmas gifts.

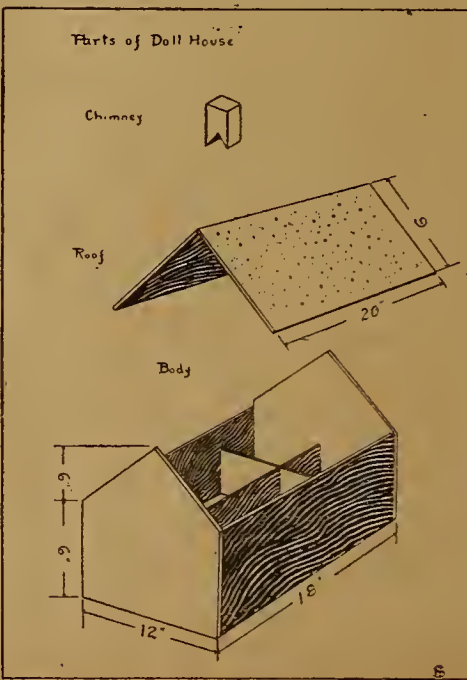
This being the case, try making the device illustrated for him, and see if you don't get the thanks of the whole family! The wood used may be quar-



tered oak, cypress or well-grained yellow pine; it should be one-half inch thick for the back, the other pieces one-quarter-inch stuff. The back is a rectangular piece eighteen inches long and ten inches wide; the corners should be rounded off and the upper curves made with a compass saw, although with a little more labor they may be whittled out and smoothed with sandpaper.

The upper box—designed to hold collar buttons and stickpins—may be made in either of two ways. The triangular shape shown in the detail sketch makes it easier to get at the ties, but is not so roomy as the square form; the latter is shown in the perspective drawing. For the triangular box you will need four partitions—made by sawing two pieces, each one and three-quarters inches square, diagonally in half—and a front board ten inches long and two and one-half inches wide, the latter being properly beveled at the lower edge. The square box requires four partitions one and three-quarters inches square, a front twelve inches by one and three-quarters inches, and a bottom of the same size as the front. Whichever style you use it should be put together, after staining, with small wire nails and fixed to the back by means of nails driven in from the rear; its top should be two inches down from the upper edge of the back board.

The brackets for the tie rack are made by sawing a piece two inches square diagonally in half, and then with a chisel cutting a hole one-half inch square in each; the bar is one-half inch square and twelve and one-half inches long and is glued into the holes in the brackets. The gluing should be done before the brackets are nailed to the back board.



Christmas Gifts of Real Worth

For the Boys and Girls

Lovely Dressed Doll



Premium No. 583

WE WANT every little girl in *Farm and Fireside's* extensive family to have one of these beautiful dressed dolls. Just think, this doll is almost as large and looks very much like a real baby. She opens and closes her eyes and goes to sleep, and with her pretty face and beautiful hair is just the doll that every girl will want. Her limbs are jointed, and her dress and hat are tastefully and prettily trimmed. This doll is manufactured abroad, in the country where all of the best dolls are made, and we have gone to a great deal of trouble and expense in order to secure this doll for our little ones.

Our Xmas Offer

This beautiful dressed doll will be sent you, all charges prepaid, for a club of five yearly subscriptions to *FARM AND FIRESIDE* at 35 cents each. Your friends will be glad to subscribe and save money for themselves at the same time they help you win the doll, OR,

This beautiful dressed doll will be sent you, all charges prepaid, as a Special Christmas Gift if you will send us the renewal of your own subscription for one year, accompanied by a total remittance of \$1.00. This is truly a Christmas gift bargain.

Get a Watch and Fob

For That Boy HERE is a chance to obtain a handsome and useful watch and a fine leather fob with a gilt metal charm. *Farm and Fireside* guarantees you satisfaction.

DESCRIPTION: This watch has a handsome nickel case, with open face. It is a stem-wind and a stem-set, just like other high-priced watches. It has a close-fitted snap back. It is only $\frac{3}{8}$ inch in thickness. It is a perfect timekeeper, tested and regulated before leaving the factory. It is engraved front and back, and is a watch of which anyone would be proud.

The Fob is of handsome black leather with a polished buckle, like illustration, with a rich gilt charm handsomely engraved.

Act Quick



Premium No. 762

MOVEMENT: Regular 16 size. Lantern pinion (smallest made). American lever escapement, polished spring. Weight, complete, with case, 3 ounces. Quick train, 240 beats to the minute. Short wind, runs 30 to 36 hours with one winding.

Every watch is fully guaranteed by the manufacturers and by *FARM AND FIRESIDE*.

The manufacturers will make all repairs for a year free, as explained on the guarantee.

Our Xmas Offer

This fine watch and fob will be sent you, all charges prepaid, for a club of eight yearly subscriptions to *FARM AND FIRESIDE* at 35 cents each, OR,

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This Pen Guaranteed to Write



Premium No. 767

THIS is a pen that anyone would be proud to possess. It has a beautifully chased barrel with solid 14K gold pen. With ordinary care it will last a good many years and we guarantee it will write.

Our Xmas Offer

This Reliable Fountain Pen will be sent you, all charges prepaid, for a club of three yearly subscriptions to *FARM AND FIRESIDE* at 35 cents each, OR,

This Fountain Pen will be sent you, all charges prepaid, as a Special Christmas Gift, with the renewal of your own subscription for one year, accompanied by a total remittance of 70 cents.

Daisy Air Rifle

Premium No. 759



A YOUTHFUL CRACK-SHOT

THIS is the wonderful Daisy air rifle. It is a repeater—shoots 350 times without reloading. It is just the rifle for a boy. What boy would not be delighted with this splendid air rifle for Christmas?

A True Shooter

Boys, this rifle shoots accurately. Lookout, crows and hawks, if a boy ever gets after you with this Daisy air rifle. It uses no powder—makes no noise—uses air and shot. You will have use for it every minute. Expert workmanship has made this a wonderful gun. This rifle is provided with pistol grip, true sights, and is so strongly made it is almost impossible to get out of order. It is extremely simple in construction. It makes boys grow to be manly, self-reliant men. It develops keenness of sight, steadiness of nerve and quick, alert action. It makes them healthy and strong—sends them out of doors.

Our Xmas Offer

This Daisy air rifle will be sent you, all charges prepaid, for a club of eight yearly subscriptions to *FARM AND FIRESIDE* at 35 cents each, OR,

This Daisy air rifle will be sent you, all charges prepaid, as a Special Christmas Gift if you will send us the renewal of your subscription for one year, accompanied by a total remittance of \$1.40.

Real Weeden Steam Engine



Premium No. 772

THIS is a real steam engine for the boys and will be a source of entertainment and instruction to them. This toy engine contains all the fundamental principles involved in a large-sized engine. It is perfectly simple and harmless in operation. To the youngster of mechanical turn of mind, this Weeden steam engine will be the grandest present that he could possibly receive. This is without doubt the best toy engine on the market. It has all the parts of a regular steam engine, a fly-wheel, cylinder, boiler, piston, whistle, etc. Every engine is tested before it leaves the factory and is in good running order. Duplicate parts can always be obtained in case of accident or breakage. Every real live boy wants one of these engines. It will be mighty interesting for the boy to have a real engine that he can start and stop and run himself. It will give him a lesson in mechanics that will be worth a great deal to him in after years.

Our Xmas Offer

This Weeden steam engine will be sent to club-raisers, all charges prepaid, for a club of five yearly subscriptions to *FARM AND FIRESIDE* at 35 cents each. One of the subscriptions may be your own renewal, OR,

This Weeden steam engine will be sent you, all charges prepaid, for the renewal of your own subscription for one year, accompanied by a total remittance of \$1.00.

Handsome Gold Bracelet



Premium No. 850

THIS illustration shows the very latest and most popular kind of a bracelet. It has many excellent characteristics and is beautifully engraved in a conventional design.

Bracelets of this width and general design are extremely fashionable at present. This bracelet must not be confused with any cheap or tawdry kind of a bracelet on sale at some department stores, for it is a splendid quality bracelet which anyone should be proud to possess. It is substantially plated with gold and guaranteed to give the very best satisfaction, and to wear well.

Our Xmas Offer

This handsome gold bracelet will be sent you, all charges prepaid, for a club of seven yearly subscriptions to *FARM AND FIRESIDE* at 35 cents each, OR,

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KNOX Peanut Dainties

1 envelope Knox Gelatine
½ cup cold water ¾ cup boiling water
2 cups light brown sugar
2 cups roasted peanuts, chopped

Soak gelatine in the cold water 10 minutes. Add sugar to the boiling water and when dissolved add the gelatine and boil slowly 15 minutes. Remove from fire and add 1 cup of the peanuts and 1 tablespoonful lemon juice (or ½ teaspoonful of the Lemon Flavoring found in the Acidulated package dissolved in a little water).

Wet pan in cold water and turn mixture into it to depth of ¼ inch. Let stand over night; cut in squares and roll in ground peanuts.

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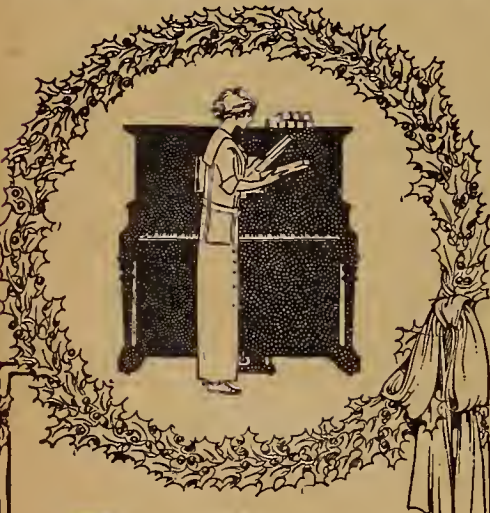
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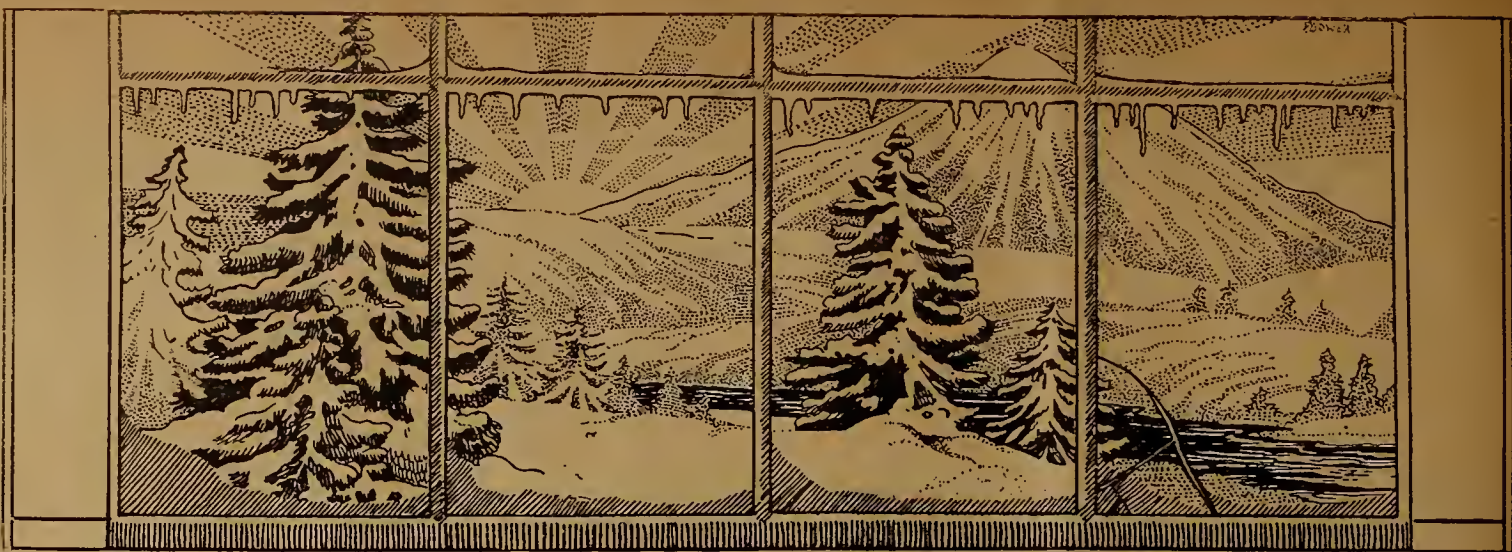


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Mother Nature's First Aids for Christmas

By Mary Hamilton Talbott

HOW often it is that the girl who lives in a small town or the country looks with envy on the lot of her city cousin at the Christmas season, the shops seem such an endless resource. What could she not do, what could she not make, had she such rich storehouses of materials! Instead of turning covetous eyes cityward, why does she not look to the resources which Mother Nature offers to those who have eyes to see and invention to use. Practically every State possesses some unusual features which would delight dwellers in other States, but owing to their familiarity to those who reside in their midst seem not to be looked upon as possible gifts.

Gifts of Forest and Field

For instance, girls living near or in the southern mountains have a perfect treasure house from which to choose. Here are the scarlet galax leaves which grow naturally in only two or three places in the world. These leaves keep fresh indefinitely and are much prized at the Christmas season for table decorations, wreaths, etc.; and there are, too, in these same places holly, mistletoe, long-leaf pine and little rhododendron bushes, chestnuts, chinquapins and odd-shaped mountain baskets which can be fashioned from the barks of the trees and mosses, all of which could not help but bring pleasure to the recipients. Even cotton bolls are fascinating to those who are not accustomed to them. No where else in the United States but in South Carolina can one procure native-grown tea, surely a novel gift for anyone. Florida offers guavas and limes, not so generally sold in the markets, and golden kumquats with their decorative foliage, which make an attractive centerpiece or are equally desirable for preserves or consumption as they are.

The New England housewife thinks so little of bayberry candles that they usually grace an unappreciative kitchen shelf, while her friend in another section of the country pays a goodly price for those on her well-appointed table. The bayberries to make candles should not be gathered until the frost has set the wax on the berries; this is when they make the best candles. "Waxers" of the translucent green wax are an addition to any work basket. A large-sized thimble makes a good mold for these, taking care to oil it well before the hot wax is poured in. Maple sugar, so hard to obtain in an unadulterated

dishes. Fish au gratin or scalloped oysters are especially good when cooked in these natural ramekins. Two dozen shells are none too many for one gift, because they become discolored and cracked after being used many times. Try to have the shells of uniform size.

The birch bark of Michigan and all our Northern States is a valuable contributor to the gifts of those who live near them. Boxes made of birch bark, filled with sugared nut meats or crystallized mints, find a welcome any place. In the mining districts of Michigan curiously shaped pieces of copper for paper weights and other purposes are to be

yearly, and yet they served as place cards at a rustic luncheon of a city friend. In each was a quotation. Mine was, "Give what you have. To some it may be better than you ever dare to think."

In almost every country garret are old-fashioned herbs and lavender, carefully dried for home use. They are a bonanza to those who have them. I know a girl who yearly sends a friend a box of herbs made by the following formula to use as a moth preventive in her woollens and furs instead of evil-smelling moth balls: Rosemary and spearmint, each a half pound; tansy and thyme, each four ounces; freshly ground cloves, two tablespoonfuls. If one wants to be generous to a careful housekeeper who thinks much of her linen closet a bag of crisp tissue paper filled with lavender and tied loosely at the top with ribbon makes a nice gift. Lavender with a little lemon verbena added makes delightful sachets, which can be as elaborate as one wishes, but Japanese paper napkins are pretty and answer every purpose. One hardly thinks of hops as available for a Christmas gift, but a pillow made of this herb would be gratefully received by a sleepless friend. A fine lawn makes a good covering for such a pillow, which need not be more than eight inches long and six inches wide.



Make a mountain basket

had. And all through the Great Lakes region pine and hemlock forests abound, which means a sweet-smelling pillow.

In the North and Middle West there grows the locust thorn. Did you know one of these thorns makes a stiletto sharper than any silver one which can be bought? Surely the friend who embroiders would appreciate this. If the donor wishes to improve upon Nature's crude output the local silversmith will put a band of silver on it bearing the friend's initials. Baskets and all sorts of queer Indian handicraft may be had in New Mexico; and Colorado furnishes piñon nuts and pine gum.

Search the Bushes

California has so many resources one can find them on every side; ripe olives, figs, orange blossoms, decorative pepper foliage and berries, and the ever-present rose lends itself readily to the popular rose beads which anyone who knows how can make. The recipe of one girl who fashions many of them is as follows: When a goodly quantity of rose petals are collected put them through the food chopper each day for seven days, and stir occasionally between times. They must be kept in an old iron kettle which is somewhat rusty, as the action of the iron rust and some quality in the rose petals seem to work together to make them beautiful. At the end of seven days, with the aid of a little water for moistening, the macerated petals may be carefully formed into beads of any desired size and then placed in rows on hatpins to let them dry and harden and also make the necessary openings for strings. They may be strung in many charming combinations and will last for years. The rare fragrance of the rose garden always clings to them, and when worn they lend an elusive, dainty odor to my lady's lingerie.

And for those who have canvassed the output of Nature and see nothing "but what every other place has" there are still many things in the storehouses of Mother Earth which are most acceptable to city dwellers. The empty satiny pods of the milkweed with their shell-like interior and lacy overcover do not seem to mean anything to those who see them

Fingers are Worth More Than Money

One country girl was very much surprised one year to find that her city friend had paid three dollars for the little Christmas tree which decorated the center of the table, so the following year she chose some shapely little spruces, fitted them to boards, covered the latter with moss, and trimmed each with wee oranges whittled from carrots, red roses cut out of deep-hearted beets, animals and birds from peanuts, with pen-and-ink feathers and broom-straw legs and tails, acorn tops and popcorn chaus. The delight they brought to the recipients was well worth her trouble, and the cost was just the express for sending.

The harvest from the fields, in the way of jelly and jam, holds forth wonderful possibilities, especially if one has captured the tang of the wild strawberry, wild cherry and black currant, the wild hawthorn and plum, the barberry and elderberry, for even the most exclusive city shops do not have them for sale.

And then there are the beautiful ferns which grow almost everywhere and



Country gifts for city friends

form, sits side by side with the bayberry candle, never looked upon as a gift anyone would be glad to have. Provincetown and Gloucester women every day eat fish delicacies which their inland sisters in some small town could not procure, and yet the facilities for shipping such things now make such a gift possible. Any seacoast person can send an inland friend some large perfect shells, which make the very nicest little baking



A real tree out of forests

which everyone likes to have, and these have but to be taken from the woods and cared for; the winter ones can be taken up any time. One girl last year who was familiar with all kinds of ferns sent many of her friends a book of common ferns correctly named and accompanied by appropriate quotations. Really the girls who live on farms and in small villages have opportunities the average city dweller might regard with envy.

The Housewife's Club

WHEN YOU OPEN A PATTERN take a lead pencil and write on each part the name of it and a good deal of time will be saved. This is especially helpful where there are a good many small pieces that are almost alike.

Mrs. J. J. O'C., Washington, D. C.

FOR A WINDY PORCH—Here is something that gave us a vast amount of comfort last winter, and which I never saw used by anyone else, although so simple. We have a screened-in porch at the kitchen door, and the cold winds in winter have always kept the room cold till we bought enough unbleached muslin to cover the screen on the porch. We tacked it securely over the outside, then nailed strips of lath all around at top, bottom and sides, and along every post. Since then there is no cold draft sweeping through the kitchen every time the door is opened and it is an easy matter to have fresh air in the kitchen on even the stormiest days.

Mrs. A. W., Oklahoma.

LAMP WICKS—To insure a good light, wicks must be changed often, as they soon become clogged, and do not permit the free passage of the oil. Soaking wicks in vinegar twenty-four hours before placing in the lamp insures a clear flame.

E. P., Wisconsin.

NEW KETTLES PREPARED FOR USE—The best way to prepare a new iron kettle for use is to fill it with clean potato peelings, boil them for an hour or more, then wash the kettle with hot water; wipe it dry and rub it with a little lard; repeat the rubbing for half a dozen times after using. In this way you will prevent rust and all annoyances liable to occur with the use of a new kettle.

E. P., Wisconsin.

TO KEEP HONEY—Bees' honey can be kept like new, without candying, for an indefinite period, if stored always in a warm place. "It is a hot-weather product," said a veteran beekeeper, "and should be kept in the warmest place you have." Since then I store it on the upper shelf of a warm pantry.

Mrs. M. W. B., Massachusetts.

HOW TO COOK RICE—Wash thoroughly one small cupful of good unbroken rice and add four cupfuls of cold water and one-fourth teaspoonful of salt. Put in a granite or earthen receptacle and stir well. Set in a not too hot oven, and if in danger of browning on top put on a cover. Do not touch it again until it is done; which will be in about one hour. Every grain will be separate, snow-white, and delicious. Serve with cream and sugar.

Mrs. E. M. D., Florida.

GINGER COOKIES—One cupful of butter, one cupful of sugar, two eggs, one cupful of cooking molasses, one cupful of sour cream, one teaspoonful of soda, one teaspoonful of ginger, flour enough to make a soft dough. Roll rather thin and bake in a quick oven. This recipe will make between seventy-five and a hundred common-sized cookies.

Mrs. R. M. S., Kansas.

DEVIL'S FOOD THAT NEVER FAILS—Two cupfuls of brown sugar, one-half cupful of butter, two eggs, one-half cupful of sour milk, two cupfuls of flour. Pour

one-half cupful of boiling water over one-half cupful of grated chocolate; into this stir one teaspoonful of soda. Add to above mixture and beat. Bake in three layers and put together with a white icing.

Mrs. R. M. S., Kansas.

SOFT GINGERBREAD—One cupful of sugar, one-half cupful of shortening, two eggs, one cupful of molasses, one tablespoonful of ginger, one tablespoonful of cinnamon, one heaping teaspoonful of soda dissolved in a cup of boiling water, three and two-thirds cupfuls of flour, and a tablespoonful of vinegar. Beat well and bake in a moderate oven thirty-five or forty minutes.

Mrs. H. W. H., California.

BUTCHERING SUGGESTIONS—Cut your lard into small pieces and run through the meat chopper before rendering, and you will have almost all lard and very few cracklings when through cooking.

A teaspoonful of common baking soda in the water in which you start your lard to rendering makes it white and sweet.

Sprinkle a thin layer of salt in the bottom of jars before pouring in your newly rendered lard and it will not get rancid.

Do you know that the lean meat taken from a well-cooked hog's head, with just enough of the fat to make the necessary richness, added to fruit, spices, and the other usual ingredients makes excellent mince-meat? Some like it much better than that made with beef and suet, which are sometimes difficult to procure in the country.

Mrs. R. L., Missouri.

TO KEEP WINDOWS FREE FROM ICE—Rub over them occasionally a cloth dipped in alcohol.

BULLETINS—I was wondering how many housekeepers know what a great help the bulletins issued by the United States Government Department of Agriculture are. I have nearly all that may be helpful to a housekeeper and homemaker and find the information reliable and practical.

M. D. T., South Dakota.

EGGS THAT ARE FROZEN—I used to put eggs which were frozen into cold water, but now put them into hot water instead, and find that the yolk does not stay hard and they are almost as good as if not frozen.

SQUASH PIE—Cut squash in two, clean out, place cut side down in oven, and bake. Press through colander. To one quart of sifted squash use three eggs beaten light, one cupful of sugar, one teaspoonful each of cinnamon and ginger, one quart of milk. Mix all together till smooth. Bake with under-crust.

Mrs. A. A. P., Michigan.

RAISIN PUFFS—One-half cupful of sugar, one heaping tablespoonful of butter, two eggs, one cupful of milk, two cupfuls of flour, one cupful of raisins, chopped and floured, three teaspoonfuls of baking powder. Steam in buttered cups one-half hour. This makes twelve cupfuls.

Sauce for Puffs: Two cupfuls of brown sugar, two cupfuls of hot water, two tablespoonfuls of butter, two tablespoonfuls of flour, one teaspoonful of vanilla. Cook until thick. Serve hot.

Mrs. L. S. G., Colorado.

"Can Be Exchanged"—By Hilda Richmond

"WHY do you want to exchange it?" asked a busy matron in the throng of Christmas shoppers as a friend laid down a pretty article of dress and the clerk informed her that such goods could not be exchanged. "When I settle on a gift I never change my mind. I have enough trouble getting things in the first place without wanting to exchange them." She was amazed when her friend informed her that she desired the privilege of exchange for the recipient of the gift. And she was still more astonished when the friend informed her that she always enclosed a little envelope marked "Can Be Exchanged" with every gift, and inside the envelope placed the name of the firm where the gift was bought, together with the price mark and label.

What a world of woe might be saved if only other people would send that welcome inscription with their gifts! It certainly is distressing to know how many misfit presents there are at Christmas, particularly in the matter of

giving to children. One wise auntie permitted her small relatives to go the day after Christmas and personally exchange any gift they had from her, and a more satisfied group of youngsters would be hard to find. True, the things were picked over, but if they saw nothing that pleased them occasionally they took a credit slip and waited till later to buy an especially desirable gift for themselves.

It is next to impossible to find out the secret longings of people at Christmas time, especially the longings of those who have little money to spend for personal needs, so the most sane and kindly thing to do is to permit the exchange of the gift, if exchange be desired. The givers who do this are greatly beloved and their money is not wasted at holiday time. Contrary to popular belief, it does not detract from the joy of giving or receiving to make this provision. The sentiment of a present lies in the love of the giver not in the special object she may have chosen.

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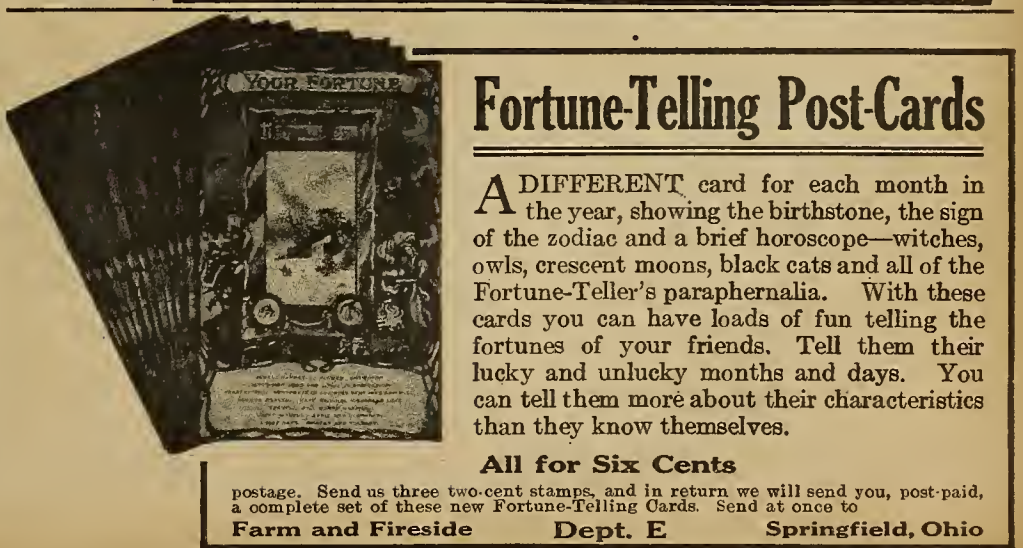
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Farm and Fireside Dept. E Springfield, Ohio

Stump Land is LOAFER Land!—

Says the U. S. Government

Pull Out the Stumps with the **HERCULES** All-Steel Triple Power Stump Puller

Stump land is *loafer* land. Loafer land is *failure* land—*robber* land. It pays you *no return for taxes*—it takes away half the realty value of the land—robs you of big money you *should* get and *could* get if the stumps were out of your fields.

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The Hercules is the *only* All-Steel Stump Puller made. We know its strength. We guarantee it for 3 years against the breakage of any casting, *whether the fault is yours or the machine's.*

The triple power feature gives the Hercules *more pull* than a locomotive. You can make it single or double power also. It is low-down in construction—self-anchored or stump-anchored. No other stump puller, or method of clearing land, can even *compare* with the Hercules.

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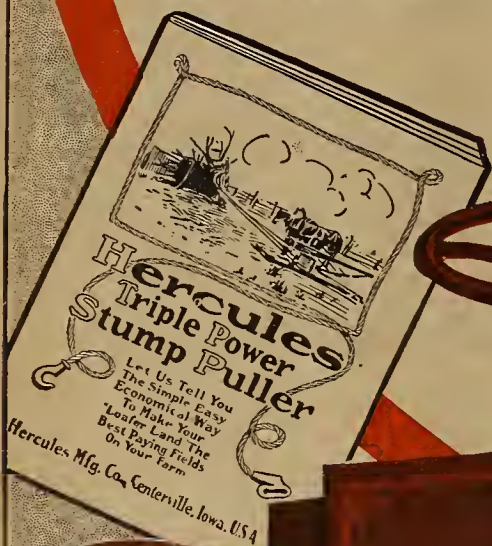
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Let Me Send You My New Free Book and Special Price Offer at Once!

Send me your name and address. I know my book will interest you. I know you will be glad to get my low price—a price that is astounding thousands of men who are writing in now for this very same offer. We have only a limited number of Hercules Stump Pullers to sell at this remarkable introductory price, so send the postal now. Let me tell you facts about stumps that will surprise you. I'll show you what crops to raise on the virgin soil where the stumps stood and lots of other information that I haven't room here to mention now.

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Hercules Mfg. Co.
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Grand Prize Yellow Strand Wire Rope Used on Hercules Pullers!

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of building the canal. And experts say this Yellow strand rope is one of the big helps that will enable Uncle Sam to complete the canal a whole year before expected. Don't forget—it's the Yellow strand

cable that is showing such wonderful strength—the Yellow strand rope that is beating all others on every test put to it, under all conditions all over the world. And it is the Yellow strand wire rope that is used exclu-

sively on the Hercules Stump Puller—not a green strand, blue strand, white strand or red strand—but a YELLOW strand—don't forget that—and don't let any unscrupulous person or company confuse you.

U. S. Department of Agriculture

FARM AND FIRESIDE

EVERY OTHER WEEK

THE NATIONAL FARM PAPER

SATURDAY, DECEMBER 20, 1913

5 CENTS A COPY



DON'T MISS THESE GOOD THINGS SOON TO COME!

"The White Whirlpool"

Imagine yourself on a personally conducted tour to be the guest of a hundred persons, each engaged in a special line of dairying. Some are city milk dealers, others are chemists, others inspectors, condensed-milk manufacturers, etc. They will personally show you through their places of business and explain their methods and just how they make their money. Your visits extend from Boston to Seattle, and St. Paul to New Orleans. With you goes a guide from FARM AND FIRESIDE who sees that every courtesy is shown and that nothing of interest is overlooked. When you get home you feel that there is more to the dairy business than just milking cows, and should your returns for milk be unsatisfactory you are better able to know where the trouble is and how to make it right. If you want to make such a trip read "The White Whirlpool" beginning in the next issue.

All Hail, January!

Early January is musical with the echoes of Christmas fun, through which prophetic voices out of the future weave a symphony of new resolutions. In FARM AND FIRESIDE for January 3d you will hear both the echoes and the voices from the future.

Where is My Package?

Among the echoes is the story of a lost Christmas package. When you see the illustration you will know at once whether to laugh or cry.

While the Clock Ticks

Have you ever considered how many things might happen that don't, while the clock ticks? How you might learn all there is to know about something if you just harnessed your energy to those revolving hands? All men are created equal—yes, in respect to time; the day gives to each of us twenty-four hours of it. But at the end of 1914 some of us will have drawn out of those twenty-four hours large amounts of knowledge and wisdom; others only small amounts. Great men and women might be called great miners in the veins of time. FARM AND FIRESIDE will tell you against what difficulties some of these have found and refined their ore.

Bacon or Lard

Boys will be interested in an article on hogs, with two illustrations in which the marketable portions of the hogs are charted. In this way the boy can quickly see how to appraise the animal before him, and how to select wisely the type he wishes to raise. This is the first of a series by Mr. John Y. Beaty, dealing with farm problems from the boy's angle.

College in Your Father's House

There is a kindly New Year's monitor who has something to say to the girls.

A Friend in Disguise

Soon we shall all be grateful to that bugbear, the High Cost of Living. It is teaching us many new wrinkles which vary the old humdrum. Because meat is expensive and the corn crop poor, our Government is experimenting with Kafir corn, soy beans, and so forth, and FARM AND FIRESIDE will have something to say later about cereals and breads and cookies made of them. It has already given recipes for vegetarian suppers, and in January it will publish one woman's experiences in cooking nutritive dishes without eggs.

What Can be Done

The Experience Bazaar will contain a notable letter from a successful farmer's wife, showing how they broke the path to success.

The Child at Home

A new department for mothers will open on January 3d, devoted to the interests of the child in his home. It is the purpose of this department to give as careful attention to the farm home as a training ground for our young people as is given to the rural school and the rural church. It will be filled with true stories of adventures among children in their homes, adventures with bright children and dull children, with children strong and delicate, earnest and capricious. All that the editor knows and feels about motherhood will be at the disposal of inquirers.

WITH THE EDITOR

Judging Men and Dogs

This dog problem bids fair to cost me a lot of friends. Every sheep-killing dog in the United States is now a foe to FARM AND FIRESIDE and its editor—and some excellent people have jumped at the conclusion that I'm planning a regular massacre of dogs. Nothing could be farther from the truth. I like dogs. The more I see of some men the better I like the dogs. I can't commend the judgment of any animal which will stand the abuse from any other animal which dogs will stand from men, not only with patient endurance but with enthusiasm and abounding affection. But being a man I confess that I like dogs. They look up to me and flatter me so.

I wish we could be as generous to our fellow men, however, as we are to dogs. We judge dogs by their behavior at their best. We board several millions of sneaking, treacherous curs because to some people at some times they are affectionate. And we judge the whole race of dogs indulgently by reason of the fact that some dogs are fine, brave, intrepid, unselfish fellows. If we would give the whole race of men our esteem on the basis of what men are at their best; if we would take the poor, downtrodden cur men at the value of men who are not downtrodden but fully developed, unwhipped, upstanding men, this world would be a better place. And I really think that men ought to have as charitable judgment as we freely concede to dogs.

Make the New Dog Expensive

The program I have mapped out is one which will result in the passage of laws which will not interfere in the least with the dogs now living. Any friend of the dog ought to be satisfied with that. I would, however, make laws which would gradually lift the possession of a dog up to the scale of a serious matter. I don't know that I'd make the same laws against all dogs—we'll look into that further in the future. But I would have all the dogs now existing listed, and when any person should get a new dog I would make it expensive to him. I would make it so expensive that he would not get the dog, in most cases.

Mr. James D. Bowman of West Virginia writes me of an occurrence which shows the hold the dog of to-day has on the people. His letter shows why all dog laws passed heretofore have been failures. Here it is:

To-day a circumstance happened which makes me understand as I never did before that fondness for dogs to which you refer in your article describing your plan for taxing dogs.

I was walking on the railway track and had almost crossed the long B. & O. railroad bridge across the Monongahela River below Fairmount. I stopped at a "look out" to let a down passenger train go by. As the train approached the bridge I saw a dog running on the track between the rails oblivious of the approaching train but intent seemingly on crossing the bridge. Some rabbit hunters had just gone over and he evidently belonged to them.

Now I am no dog lover but my sympathies were with the dog, and I hoped the train would beat him to the bridge so he might leave the track safely. But no, he kept right on and was fifty feet onto the bridge when he noticed the train. He gave a pitiful look, then redoubled his efforts, but in another moment he had disappeared under the pilot of the locomotive.

I said, "Well it was a quick death anyway," and felt no sorrow that there was one dog less. This feeling gave way a moment later to one of compassion when I saw that the poor brute, evidently badly hurt, was trying to go back. On going up to him I saw that his right foreleg was severed close to his body and he was trying to walk on three legs, smearing the ties with his blood. As I passed him he gave me a look that would pierce a harder heart than mine.

I heard the owner down the track some distance whistling and calling. And, hurrying toward him, I whooped and beckoned with my hat. He came fast toward me and when in speaking distance I called, "Please go up there quickly, man, and shoot that poor dog and put him out of his misery."

He looked at me as if struck a blow and said, "What's wrong?"

I saw it would hurt, and told him as gently as I could that the dog had been run over on the bridge and his leg cut off close to his body, and again begged him to shoot the dog.

He was a strapping young fellow, perhaps eighteen or nineteen years old, but his agony was distressing to witness and he made no effort to conceal it.

"Oh, I would rather shoot myself!" he declared. He walked back and forth a few steps, then threw his double-barrel gun down, threw himself on the ground and sobbed aloud. I went down the track and sent to him his companion, another young fellow, perhaps a brother.

Farther down the track I caught a shifting engine back, and from my perch on the rear end of a box car I saw the young fellow who was so badly broken up standing on the abutment and looking very dejected. As we passed the "look out" the other boy was kneeling beside the mangled dog sadly stroking him, and the patient animal was fondly licking his hand.

I felt a lump in my throat, and as I looked away a mist was before my eyes of which I was not ashamed.

It's a Question of the Sheep Industry

I can appreciate this boy's feelings, for I have cried over a dying dog too, and am not ashamed of it. I would not think of taking the dog from such a young fellow but I do not think it any hardship to keep him from getting another, especially in view of the fact that our whole sheep industry is almost ruined by dogs. Mr. W. H. Reynolds of Massachusetts asks a question in the following letter:

I was much interested in your suggestion of the best way out of the dog nuisance. It is a very important question in the New England States.

Statistics tell us we have seven hundred thousand acres of unused land, land used neither for crops nor forestry. Much would make good pasturage for sheep or small animals seven months in the year, but good for large animals only about six to eight weeks.

In addition to your way of getting rid of dogs I would have the State contract for a large quantity of galvanized iron fencing. Distribute and sell this wire to the farmer at cost. Please give objection to this plan.

My objection to this scheme is that it seeks to do for the farmer what he can afford to do for himself. It may be that where a large territory is freed from dogs the State might properly fence the depredators out with wire fencing and add the keeping of them out to the duties of the forest rangers and game-keepers. But I don't know. I have great faith, however, in the plan of penalizing the getting of a new dog.

Robert S. Quick

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FARM AND FIRESIDE is published every other Saturday. Copy for advertisements must be received three weeks in advance of publication date. \$2.50 per agate line for both editions; \$1.25 per agate line for the eastern or western edition singly. Eight words to the line, fourteen lines to the inch. Width of columns 2 1/2 inches, length of columns two hundred lines. 3% discount for cash with order. Three lines is smallest space accepted.



PUBLISHED BY
THE CROWELL PUBLISHING COMPANY
SPRINGFIELD, OHIO

Branch Office: 381 Fourth Avenue, New York City; Tribune Building, Chicago, Illinois
Copyright, 1913, by The Crowell Publishing Company
Entered at the Post-Office at Springfield, Ohio, as Second-Class Mail Matter

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Vol. XXXVII. No. 6

Springfield, Ohio, December 20, 1913

PUBLISHED
BI-WEEKLY

Common Sense at Last

THE American Poultry Association has at last decided to establish and publish a standard for market poultry and eggs. We take this to mean that we shall one of these days be able to see in poultry shows, market poultry judged by meat-producing standards, just as we now see judged those other meat-producing animals, swine and cattle. We shall see color and feather forgotten in the subject of meat—quantity and quality of meat.

And instead of having fowls of so-called "laying breeds" judged by the "American Standard of Perfection" in form and feather, we shall see them awarded prizes by judges who will forget everything else in their preoccupation with the subject of eggs.

We shall not see these things all at once, but this new policy on the part of the Association marks the achievement of common sense at last. After a few years the farmers may be able to get utility fowls instead of fancy fowls, when they seek to improve their flocks.

Certified Herds

WE HAVE had certified milk for a long time; now we are to have certified herds. Dairy men who are not above or below the reach of competition should be interested in this new departure, which makes its appearance in Illinois.

The state board of live-stock commissioners offers to help eradicate tuberculosis from dairy herds, and after it is eradicated will give certificates of the facts. The dairy men who have these herds will be said to have "accredited" herds.

Now when one dairyman in a town has an "accredited" herd the others will all be by that very fact "discredited." The "accredited" herd, with a state certificate to display, will either get the business away from the "discredited"—or perhaps we should say the "unaccredited"—dairies, or will be able to get better prices.

There are various ways to fight tuberculosis. One is to make the dairyman bitter and angry by burdensome inspection. The other is to put the market in the hands of the sanitary dairies by the force of intelligent publicity. The Illinois plan seems like a sensible way of doing the latter.

The "accredited" herds, when Illinois gets them, will not be out of the tuberculosis woods, however. Their owners must be careful in buying new stock to be sure that all additions to the herd are healthy. Some regulation controlling purchases will therefore be necessary. And where an "accredited" herd "visits" across the fence with tubercular cattle, or otherwise meets infection from outside, trouble will result. But the scheme is a step in the right direction, and makes for progress.

Town Utilities for the Farmers

ROGER W. BABSON, a conservative financial expert, thinks that the problems of the city will never be solved until country life is made more livable. And he thinks that the things which will make farm life more livable are supplies, like those found in cities, of water, heat, light, power, rapid transit, and the like.

He asserts that the time must come when the Government must supply these things for the farm homes of the nation.

Well, if we weren't so scattered about on isolated farms it could be done. If the farmers of Iowa, for instance, were collected in villages, like the peasants of Russia, and yet were as well off financially as they are at present, water works, power and lighting plants, and trolley lines would be quite possible.

Scattered as we are, the installation of individual plants is cheaper than distributing systems would be. In fact, living as we now live, Mr. Babson's scheme looks ridiculous.

If, however, we had a taxation system which would make land cheap and production profitable, if we held land for use only, and not for sale and speculation, if we were so situated as to throw our farms into big fields tilled with tractors—in short, if our whole land system were transformed we might live in villages and have all the things Mr. Babson speaks of, and many more. But that's another story.

THERE is a strain of Hereford cattle which have distinctive dark patches on the face. Just why any breeder should care to breed for mottles is a mystery.

Pig Clubs Now

THE boys' corn clubs in the South have given us the bumper yields of corn of all history, if we are correctly informed. But for some time, now, it has been felt that the corn clubs alone, no matter how successful, leave something to be desired.

And now the United States Department of Agriculture has started out upon a campaign for the organization of boys' pig clubs in Alabama, Louisiana, Georgia, and the rest of the South. They are expected in a broad way to furnish a market for the corn produced by the boys' corn clubs.

Dan T. Gray, formerly of Alabama, has shown in the columns of this paper how cheap pork can be produced

It is doubtful if the man who raises average crops is really making more than expenses. To make money farming you must get bumper yields. Intensive farming is not so much small farming as it is better farming per acre. How big is an acre? Well, it is about as big as the man who owns it.

in the South. There can be no doubt that in a climate favorable to outdoor pasturing all the year round any man or boy who will follow the plans which have been worked out for a succession of forage crops for hogs can, if he has fair success with his corn, make pork cheaper than it can be made in the corn belt.

The boys' corn clubs are good things, and have done a great work. The boys' pig clubs are better, because they open up the more profitable field of live-stock farming.

In the meantime some of the Northern boys and girls—and we may add, men and women—are wondering what the North has done to be left out of these governmental activities. Under the authority of a commission to fight the boll weevil, Secretary Wilson allowed good old Doctor Knapp to begin a rehabilitation of the general farm practice of the South. Now that this very excusable evasion of the law has become an established policy, and further concealment is useless, why allow the South to get all the benefit? Do we have to have the boll weevil before we are allowed to creep under the tent?

A MISSOURI correspondent who thinks his farm dog a necessity believes that if all dogs were castrated, except those kept for breeding purposes, the danger to sheep would be very largely obviated. He has practised this for forty years and has had better dogs for farm purposes than his neighbors. And they haven't been running around of nights in those bands which play such havoc with flocks. There is a good deal of common sense in this. Legislators and all others who ought to be interested in more and better sheep might well consider it in relation to the big problem.

The World's Corn Record

IN 1899 Z. J. Drake of North Carolina made the record crop of corn from an acre. The yield was 255 bushels. This is the way he did it. He spread on the acre a thousand bushels—say fifty tons—of stable manure. He also worked into the soil six hundred bushels of whole cotton seed, four thousand pounds of home-mixed commercial fertilizer—formula not given—and four hundred pounds of nitrate of soda. This fertilizer, with the labor of applying it, is estimated to have cost at least three hundred dollars—so the crop did not pay.

In 1910 a North Carolina boy grew 228 3/4 bushels of corn on an acre. His fertilizing operations cost him at least two hundred dollars. Compare these yields with that of the Page County, Iowa, boy who described in FARM AND FIRESIDE the methods he used in growing about ninety-three bushels to the acre. He used no fertilizers at all, planting on alfalfa sod, and carefully cultivating. The North Carolina experience is the more astonishing, the Iowa accomplishment more profitable.

Will They Stop It?

THE peddling of garden seeds is small business for a statesman, but we pay some four hundred Congressmen \$7,500 a year each and mileage for doing it. Of course they do other things, but all the time spent in seed-peddling is paid for at the rate of \$7,500 a year. As voters we ought to be too economical to hire seed distributors at that price. When we plan our garden

we spend some time on it. We pick out the seeds carefully. If our Congressman spends any time in studying our individual needs, it must make the seeds they send us very expensive indeed, if we count only the Congressman's time, to say nothing of what the Government pays for the seeds. If he doesn't make individual selection but simply says to his clerk, "Well, you may put in the morning sending seeds to the grangers!" it's

rather insulting to those who get the seeds. Instead of a personal attention from his representative in Congress the farmer receives a measly little dol of charity. It is as if every year the Congressman sent the farmer's wife a calico apron. It is exactly the same thing, save that the apron would be a more useful gift; in either case it would seem rather insulting.

It is often claimed that the Southern Congressmen believe that the Southern farmers want the seeds sent out. We refuse to believe this. Mr. Lever of South Carolina is at the head of the Committee on Agriculture. Secretary Houston has recommended that seed-peddling be stopped. It now seems to be up to Mr. Lever.

Use the Postal Funds

AT THE end of the present fiscal year the postal savings banks of the United States held deposits of the people's money amounting to \$33,818,870. The Government is paying interest on these funds, and is keeping them in the commercial banks of the country, receiving a low rate of interest from the banks. It seems likely that the Congress now meeting will grapple with the problem of providing a better system of money-lending for the farmers of the nation. Funds will be needed to start any imaginable system of farmers' loan associations. While \$34,000,000 will not go very far in a national system of rural finance, it will do some good. Just now we are content to point out to Congress that little fund of about \$34,000,000. Why this money should not be placed with the new institutions which will need it, rather than with the old ones which do not, is a question which a great many farmers will be asking themselves—and their Congressmen.

One Winter on the R. F. D.

The Season's Hardships Act as a Bond Between the Carrier and His Patrons

By Marc N. Goodnow



RECOLLECTIONS of the winter which followed the sixteenth day of January, 1903, will always be vivid in my mind, because that was the severest cold spell the southern section of my native State had suffered for a score of years, and also because I came in daily contact with its bitterness as one of Uncle Sam's rural free-mail carriers. The combination of these two events created for me an experience which thousands of such workers have no doubt borne with much more fortitude and patience.

At the age of nineteen, after high school and a year in business, the opportunity was offered me to compete for a position as carrier on Route No. 1, already established. There were fifteen men who took the civil service examination in the town hall. Many of them had families, and all were much older than myself, but a majority of them had not had an equal opportunity to obtain an education. We were required to set down certain qualifications of character and ability, to record our weight, height, and general physical condition, and to show by reading aloud from nearly one hundred addressed cards within an allotted time that we had no serious impediments of speech or defects of sight, and that we could read names and addresses rapidly. We were required to furnish our own conveyance and whatever number of horses we needed. The salary for this work was then only \$600 a year,—it had been \$500 to begin with,—but as most of the applicants owned a horse or two, and lived on farms along the route, that sum was looked upon as well worth the having. I was a resident of the town, but the family farm was close by, and it was therefore possible to secure hay and grain for my horses at first cost.

Two weeks after the examination I was notified that I had passed with the highest grade—94—and therefore had been selected as the carrier.

With my new position came an offer from my predecessor to sell his mail wagon for \$75. It was built especially for such use but was now considerably worn. I had decided to use my own light buggy for the first month at least, but this young man was so certain that I was going to buy his outfit—which I suppose he figured I could not get along without—that after assisting me in sorting the mail early that first morning he betook himself to the city, not a hundred miles away. His father, who acted as his substitute, was relied upon to negotiate the sale.

How I Was Introduced to My Work

A new wagon could be bought for practically the same price my predecessor had asked for his old one. In plain English I told the father so that morning when I reached his home. He instantly flew into a towering rage, saying I had already agreed to the sale and that now I'd have to take it. I was threatened with all sorts of dire things, such as legal processes and the like. Worse still, the poison he declared he would instill in the minds of my patrons would have put a regiment to death.

I had every desire to begin my new work under the most favorable circumstances, just as I had every reason to expect the courtesy of being shown over the course of the mail route on my first trip, but the affair ended, of course, in hot words and in his refusal to go with me to point out the crooks and turns in the thirty-mile circuit.

It was not a pleasant introduction to a new work, though I determined to find my way around if it took all night. But it was laborious and uncertain and slow. Once I got off the route more than a mile and underwent the humiliation of being told by one of my own patrons that I was "off the track." Later I turned into the wrong lane, losing half an hour more before I found my mistake and could retrace the steps.

After that I presented the somewhat amusing if not ridiculous spectacle of a man asking his neighbors to show him the way home. Many persons were not aware that a new carrier had been appointed, and they were somewhat surprised, though always ready and willing to point out to the new carrier the directions his predecessor should have given him.

Though it had been customary for the other carrier to return to the post-office early in the afternoon, darkness found me and my horse plugging away almost ten miles from town. The postmaster and my family becoming worried over the prolonged absence resorted to the few available telephones in the district, and were finally relieved to find that I was still "on the road." It took fourteen hours, under such circumstances, to complete a trip which ordinarily required only seven or eight.

But I am pretty sure that this experience was a great help to me, for it gave my patrons an opportunity to judge me even before they had heard the assertions

of one who might be merely giving vent to his spite. Those who found their mail considerably delayed and mixed up that week did not mind it at all when they learned of the circumstances under which it had been delivered.

Because of this unpleasant encounter I immediately ordered an improved mail wagon direct from the factory and managed in the meantime to get along with my light open roadster. When the new wagon arrived, I confess there was enough of the frailty of human nature within me to gloat fiendishly as I passed the house of my predecessor's father in this brand-new vehicle colored red, white, and blue.

In the meantime it had been necessary to travel thirty miles a day in an open buggy, with letters, papers, and packages arranged in a series of deep pigeonholes. The roads were soft one day and hard the next. When soft they were in a slippery state, with from four to eight inches of clay mud on them. Where there was little mud there was much corduroy in bad condition, so that one was about as bad as the other. When they were hard they were generally so rough that it was impossible to travel at any speed because of the jolting. In the entire thirty miles there were less than ten over which my team of horses (for I had to use two horses much of the time) could trot in good weather.

The advent of cold weather made the work more of a hardship. I was compelled to don the heaviest clothes, fur-lined mittens, heavy cap, and felt boots; it was always necessary to have a foot warmer under my heavy lap robe, for I had always suffered from cold feet. In this fashion, dressed like an Arctic explorer, those daily rounds were made, with no stop for warmth and only one for rest—at noon.

We Traveled Any Way We Could

It was customary to leave the post-office at 6:45 A. M., though the hour of return could never be gauged with such accuracy. This hour of departure meant, of course, that all the mail of the evening before must be sorted then, to allow time to handle the early mail and newspapers in the morning. This early hour of departure meant also that during the wet weather many hours must be spent at night in cleaning my worn and bespattered horses. In the morning there was plenty to do in washing the mud from the buggy and in sorting mail. This got me up at five o'clock usually, often at 4:30. Sometimes, between widely separated letter boxes, there was a chance to sort mail, and this had to be done on Monday and Tuesday, when the mail was heaviest. Ordinarily, however, my consignment for the "last lap" was sorted at noon, as I ate lunch and gave my horses a feed and rest.

After a while the roads became so nearly impassable that I was compelled to abandon the buggy and ride horseback, with a mail pouch behind the saddle and a bag strapped to each shoulder. On horseback the chance to keep warm was improved by the motion of riding, but the handling of heavy mail was made more difficult. It required a combination of Indian agility and a sharpshooter's aim to deposit letters, papers, and packages in their respective boxes with any speed and at the same time avoid mishap. Once off your horse with that amount of mail it was a two men's job to get into the saddle again.

Many incidents, amusing as well as trying, occurred to break the monotony of that protracted orgy in thick clay mud. One day when I had ventured to use my roadster again I promised a marooned farmer's wife to bring her fifty cents' worth of granulated sugar. On Thursday morning I started from town with the sugar under the seat. Ten miles out the roads became so sticky it was necessary to abandon the buggy and complete the journey on horseback. On Friday the buggy was picked up again and used until noon, when I again had to resort to a single horse and a borrowed saddle. Not until Saturday afternoon was I able to deliver the sugar. Even then a trace snapped as we came over the clay hill in sight of the farmhouse, and there was nothing to do but ask the farmer's wife the privilege of storing the vehicle in her barnyard until the roads dried or froze, in payment for the delayed service. The family had been without sugar in their coffee for four days, but the prospect of having plenty of it for Sunday dinner, when relatives were expected, overshadowed the deprivation through the week.

Two Mud-Stained Months

February and March were thoroughly mud-stained. During those months the temperature was so continuously at zero that the small foot warmer was wholly inadequate to keep the biting chill from my toes and heels, and for days I walked and ran mile after mile behind my horses and wagon to keep warm. The exposure resulted in a prolonged attack of tonsillitis, but that did not prevent my making the daily rounds. In fact, I doubt if anything save a severe illness would have kept me from the work. I had apparently become inoculated with the mail-carrier's fever—the sense of duty which forbids his quitting because he fears some-

thing may happen that would impair the efficiency of the service. He comes eventually to regard the work as a privilege; and though he may sometimes complain, he takes great pride in being constant and efficient.

One day the mud was four to ten inches deep, the result of repeated thawing and freezing. The zero temperature coated its rough surface with a thick scum. Being clay, the surface soon became tough enough to bear the weight of a horse's foot and leg, but with the increasing weight of his body the crust broke through with a snap and he sank almost to his knees in the clammy mire. The mail wagon, whose four wheels cut heavily through the icy crust, with freezing mud between the spokes from felloes to hub, increased the burden tenfold.

One Day That Sticks in My Memory

Darkness began to fall at four o'clock that day, and the freezing set in with a vengeance. It was extremely doubtful whether it would be my luck to reach home at all that night, especially since the steepest climb of the entire route—half a mile long and two miles from town—was just ahead, and it was then past nine o'clock.

The horses, as might be expected, were just about winded when they reached the foot of the incline. A stinging, bitter head wind sprang up to add to the torture, and still further impeded their already slow progress. Though I had some protection from the cutting wind within my glass-encased wagon, still my fire briquette had long since given up the spark of life and the foot warmer was stone-cold. Moreover, the prospect of possibly having to get out to mend broken harness caused a chilly sensation to run up and down my spine.

Though unable to see through the pitchy blackness, I could tell from the increasing strain and the slight uptilting of the wagon that we were actually, though painfully and slowly, climbing the hill. I gave the horses free rein, relying upon their instinct to find the best spots in the road, if there were any such. Then I huddled close to my dashboard window, straining every nerve to follow their progress. I was expecting something to happen, and inwardly quaking with fear of a prolonged delay out there in the middle of the night, surrounded on every side by freezing clay mud and more than a mile from the nearest farmhouse.

I opened a side window and stuck my head out to give my faithful animals a word of encouragement. Though I could barely make out their hind quarters struggling in the darkness, I could hear every sound of their labored breathing and of the harness straining as they tugged bravely forward.

Out of the Darkness Came a Friend

At sound of my voice, as always, they "laid up in the collar," as we say, with a slightly quicker motion. Above the brittle snap and crunch of horses' hoofs and wagon wheels I heard a sharp crack, then a rip and tear like the sound of a muffled rapid-fire gun. With another step forward both horses stopped dead-still.

My heart sank to the pit of my stomach with a nauseating thud. The horses, as well as I, knew what had happened. Instinct told me we had snapped a singletree in the middle and ripped a trace from its fastening at the collar.

There were no heavy straps or ropes in my wagon, but under the seat was a cord which seemed all too frail for the use to which it must be put. I had no notion it would hold, so I strengthened the knot with a handkerchief and straps from one mail bag. These were attached to the horse's collar. With one rein doubled and knotted I improvised a fastening which might possibly act in lieu of a singletree.

The whole thing looked so insecure that I wondered why I had gone to the trouble. The wagon was freezing more solidly in the mire with every passing second, and how we were to get out of it was more than I knew. In fact, I was on the very point of unhitching my team and returning without the wagon when an incident occurred which served me then, and always after, as an effective prod to lagging, discouraged spirits.

Out of the inky blackness ahead came the crunching sound of a horse stammering uncertainly along the treacherous roadway. The approaching horse instinctively sensed the presence of others of its kind and whinnied—a joyful yet ghostly sound in that lonely place. Then the rider called out "Halloa," and I answered. As he drew up his horse he asked:

"What's the trouble, pardner?" It required only a few words to explain.

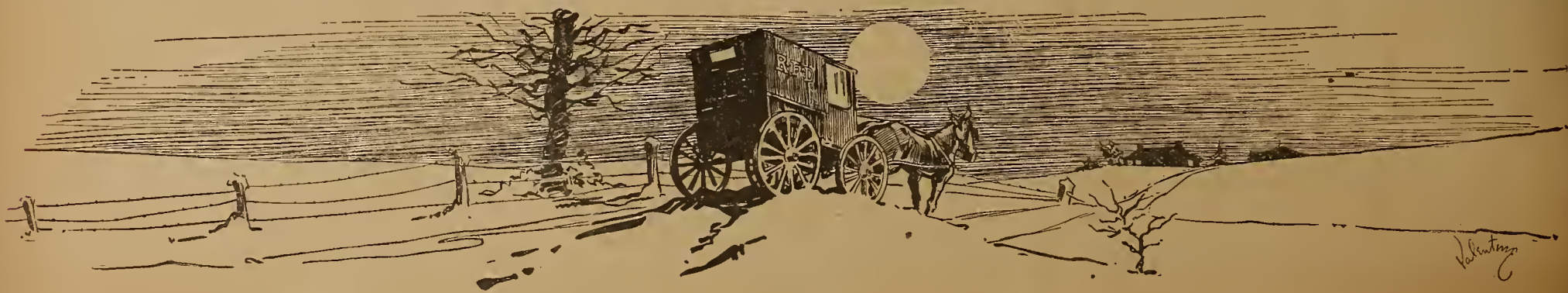
"Who are you?" my inquisitive friend continued.

"I'm Goodnow, carrier on No. 1," I answered.

"Henry Goodnow's son?"

"Yes."

"Then you'll git out of it all right. Giddap!" and he passed on into the night with never another word. The name seemed a sufficient guarantee to him of my ability to take care of myself, though I had seriously doubted it up to that moment. [CONCLUDED ON PAGE 7]



Dairying Without Reverse Gears

Forced on Through Fear of Failure. Cream Almost One Dollar per Quart

By Hollister Sage

MOST Westerners think the Nutmeg State a place of stones and boulders principally, but there are thousands of acres in the old State that are as fair and as free from obstruction as any in the favored West. The witchery of the country was just as subtle a dozen years ago as it is to-day, although the roads were not then so fine. But President F. E. Duffy of the Connecticut Dairymen's Association, then county school commissioner in the charming Lake Champlain region in New York, together with Mrs. Duffly, fell under its spell when driving through on a vacation. They saw a fine, old, colonial mansion going to decay, and although the farm was a neglected and impoverished one they invested all they owned on the spot. Their predicament was almost a dangerous one. They had acted in haste. Would repentance at leisure be theirs? Both were teachers. Mr. Duffly had never done a day's work on a farm. Can an intelligent, alert man succeed at farming if he has had no previous training? Mr. Duffly has answered in the affirmative in the few years that have sped. He admits that they look back at their temerity almost with a gasp.

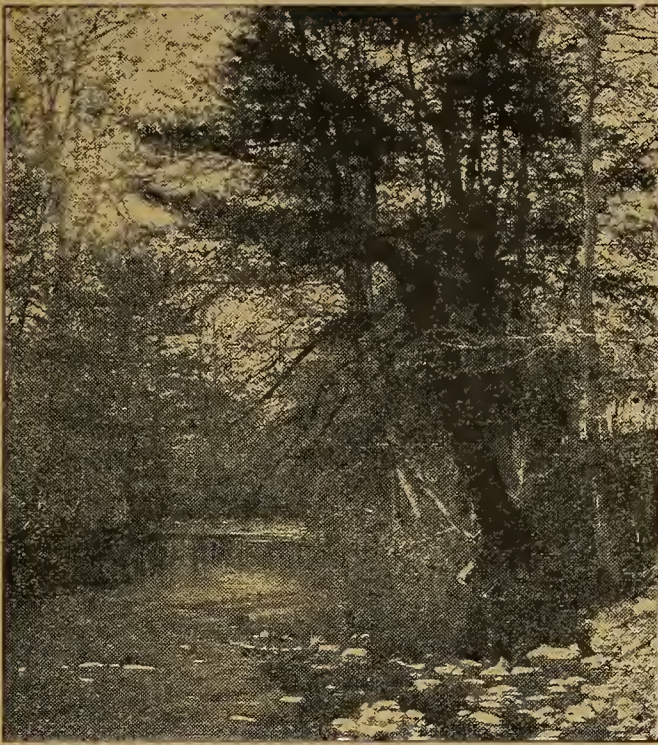
"We could raise only thirty-five hundred dollars between us," he said. "The buildings were inadequate, sadly out of repair, inconvenient, and the land was completely demoralized, to all appearance. The entire crop of hay the previous year had sold for seventy-five dollars; for our first year's growth we took an even one hundred dollars."

We Lost Money at First

"I decided that the keeping of stock would be our only possible avenue of escape from financial collapse. Cows must do it, since cows make the best returns, and some returns every month in the year. But cows were expensive, not so costly as to-day, but—well, cows we must have. However, we soon found that all cows were not good cows, at least not for our purpose. The people we had begun to supply were sensible and wanted plenty of cream on their milk. A few began to inquire for pure cream; common cows did not make what was demanded, no matter what kind of feed they were given. Furthermore, my customers needed the assurance that our cows were healthy. We found that one hundred and fifty dollars, or even more, would

not purchase the kind of a cow we had to have, so we were driven to add to our dairy business the raising of young stock that would grow up into the kind of cows we needed. Many of the cows we now have in the business we could ill afford to part with for two hundred dollars each."

The "we" of to-day includes one more interested person than it did twelve years ago, in W. E. Duffly, a



Meadow Brook, from which the farm derived its name

bright college-trained man of twenty-one years, who is as deeply attracted to the farm as his parents were.

The first two years at Meadow Brook totaled a loss of a thousand dollars, notwithstanding the best efforts of the novices. During the following two years one thousand dollars was cleared. So the fifth year was begun under about the same financial restrictions as the first, except that the farm was a far better one, the stock was finer, and, best of all, there was a more practical knowledge and a clearer vision for the future.

A 45-Per-Cent. Cream

The small fields were thrown together, making large ones easier to cultivate. Briefly, deep culture and thorough tillage were the factors that brought success, aside from dairying. Silos were built, the cows tested for quantity and quality of milk produced, pure-bred stock taken on, and many other things done when it did not seem as if it could be afforded. "But," said the owner, "we were forced to go forward or back out entirely, and as none of our machinery was made with reverse gears we went forward, always finding increased profits with which to meet increased expenses."

To-day eighty head of stock are kept on sixty-six acres, forty of which are tillable. It means hard work and plenty of it. Of these animals, sixty are pure-bred Jerseys, fifty being cows. For the past six years all of the fodder used has been raised on this little farm, and it has been necessary to feed the stock almost as much in summer as in winter. Soiling, the feeding of green foods, is so common that dry weather is feared no longer.

"The making of milk and cream that are absolutely above reproach is the keynote to our success," said Mr. Duffy. "My greatest pleasure is to be told by customers who had been using my milk and cream for ten years that they have never had a bottle that was not good. Success has come not from fancy methods but by the effort to be reasonably clean and sanitary in handling the milk from the moment it leaves the cow, observing a few simple rules with rigidity. A dairy may go to extremes, may have every milker in white, with all udders washed before milking, and still have a single milker with wet hands spoil everything. There is so much sham in the world that merit secures recognition without a trumpet. We skim a forty-five per cent. cream; this alone made a demand for it, and soon there was too little to go around, and of course the price had to be raised. Now the milk sells for twelve cents and the cream for ninety-six cents a quart, and there is still too little of it."

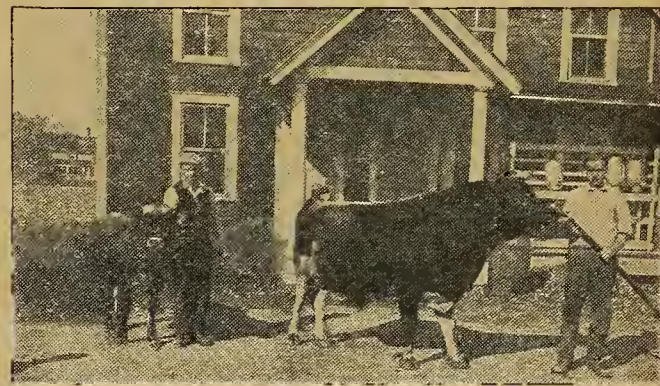
The Labor Question Not Serious

The help question at Meadow Brook is not so serious as it used to be. No effort is made to-day to use help that straggles along looking for work. The silo filling and soiling require about an even amount of labor the year round, and a squad of clean, intelligent young fellows who are trying to make a reputation so that they may become foremen is the help that is found dependable. They keep the records for the fine Jersey cows, milk with dry hands, and do all the work as if it were their own.

They need to ask few questions, as they are readers and students and not infrequently come forward with good suggestions for the proprietor's interests. In return they get good pay and clean, comfortable board and rooms. No high-class herd of any size can be kept to-day without the best of interested and efficient help.



The old house with vine-clad doors. The building to the left is the men's dormitory and sanitary dairy room



We were obliged to raise our own stock in order to get the quality of milk demanded of us

Plunging Into the Complex Business of Keeping Poultry

By Edgar L. Vincent

IT HAPPENED to be my lot not long ago to be obliged to listen to a little conference held in a city office between a man and woman. Both of these good people were wonderfully interested in farming. The lady had a small country place where she had established a poultry plant of some size, and in which she had invested a considerable sum of money.

"But she is not making anything out of it," the man declared to me afterward. "And she never has made anything. She is losing money right along."

Well, of course, we were both sorry about it and discussed the situation earnestly for some time. While we were speaking, a bit of talk I had had with a young farmer on the same subject not a week previously came back to me.

"I am well satisfied with our success with poultry," was the enthusiastic statement of this young man.

He had at one time not been very friendly toward hens; like many men, he felt that caring for poultry was beneath his dignity. But his honest confession did me good, for it gave proof of a fine spirit, as well as a marked change of heart on this very important subject.

Here we have two cases, representing two distinct kinds of poultry farming. That they are so different makes it a matter of interest to ask whether they are isolated or typical examples of success and failure in poultry. By way of illustration, here are some cases I know of personally.

Over-Capitalization, a Common Cause of Failure

A poultry plant in the West was built up by a wealthy man at an immense outlay of time and money. Probably it was the most extensive and up-to-date poultry plant in this country. Nothing was lacking to make it a success. In a few years it failed commercially. The gross returns did not equal the money expended in its equipment.

I have in mind another man who went into the poultry business in the outskirts of a little western New York village. He, too, went to the extreme in the construction of his houses, floors, trap nests, the best of methods in ventilation, and a full line of hoppers. Now he is just staggering along and the end can be only a little way off. Hundreds of thousands of dollars are being sunk in poultry every year by impractical persons ignorant of the poultry business.

But this is not all the story. I am happy to turn from this rather gloomy side of what is to me one of the most fascinating subjects in all the world to the stories of places on which men and women are doing remarkable things with poultry. Some are paying off the mortgage and improving their buildings. Others are putting surplus money in the bank. I must speak of one lady who was left alone to carry on the operations of a farm. She kept a few cows and cared for them herself. She also kept a few sheep, and they were good ones. But she decided to try the commercial poultry business. She enlarged her houses, laid out some money in good stock, and began to prove the truth of her woman's instinct. Her butter had always been in such demand that she could not make enough of it to supply the demands of her customers; and when she added the eggs to her stock of farm supplies the money fairly rolled into her hands.

A modest little woman in New York State is making a great success with poultry. It came about this way: Her husband is unable to work. The boys have taken over the heavy dairy work, and she has put her soul into poultry. She began in a small way with a fine strain of the best birds she could get. The business grew. More birds were added. The farm began to have a standing all over the country. She went to the poultry exhibitions and showed some of her birds. She took prizes. Then people wanted some of her surplus stock. She sold one pair of her birds for seventy-five dollars. She had little difficulty in disposing of all she could spare at fifty dollars, while the eggs went at prices that paid well.

There are lots of poultry failures that would make interesting reading, but it takes courage to tell them. Who of us wants to admit that we are not winning out, no matter in what particular calling we may be engaged? When we do well we are quick enough to climb to the housetop and shout it. But our failures—ah, with what a subdued voice do we whisper the tale! So the losses and the disappointments go untold and unknown except to a few intimate acquaintances. Only the sunshiny side of it ever gets to the light. And that is one reason why so many are at the present time

fearlessly launching out upon the untried sea. They read and hear about the successes, and it seems to them that they may win if others can. They do not know that their chances are about equally divided between success and failure.

The great reason why so many fail with poultry is because it costs too much for feed. The eggs sold and the poultry meat disposed of do not bring in money enough to balance the outlay for feed, care, and interest on the investment. Things have changed from what they used to be. Once every farmer kept a few hens. These birds did not cost much; their feed was so inexpensive that account was seldom kept of it. Every egg and every hen sold always represented a gain. It was like finding so much money.

But now we see men specializing in poultry. Everybody who can get a little corner of land anywhere builds a coop and gets a lot of hens. These hens must eat. Feed is high-priced. The man sends his money to the feed store in a two-bushel sack, it seems, and his feed comes back in a teacup. He wonders what this means. Can it be he has made a mistake? It looks that way, and a year or two makes it pretty plain that there certainly is something wrong. Then he concludes that all the stories about success in poultry must be fictitious and he quietly gets out of the business.

Take One Short Step at a Time

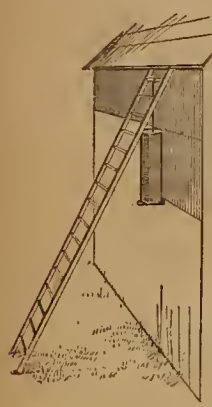
Or he sells off the cows, if he is out on a farm, quits keeping hogs, disposes of the sheep, and turns everything into the egg basket. It is a bigger thing than he supposed. Wife used to manage her little flock all right; he shuts his teeth and says, "I'll show her I can do it with a thousand." And still things don't go right. Disease sweeps the houses clean. The eggs do not hatch. The incubators seem to be a failure. What chicks do come from the shell die. It looks blue. He loses heart. The big houses begin to be still. He uses them to store his farm tools in, and without making much of a spread about it drops out of poultry.

And yet these men might have done well with poultry by proceeding more carefully. By and by, when one has served his apprenticeship, he can branch out a little, all the time carefully, buying perhaps a little more land and living a big, happy life, while he reaps substantial rewards which he has earned.

Farm Notes

Simple Way to Lay Siding

By W. A. Black



LAST summer I was confronted with the problem of applying prepared siding horizontally to a tall building. The siding, though of good quality, would not sustain its own weight if stretched sidewise. This is how it was accomplished without the use of a scaffold.

I simply put a rope through the roll and tied the end of the rope to the middle of a stout stick a foot long on which the roll was allowed to rest. I tied the upper end of the rope to the top round of the ladder, as illustrated. I then opened the roll, tacked the end to the place desired and by shifting the ladder along the side of the building, tacked the siding in place without any more trouble than if laying it on a floor. The same device works equally well with tar-paper or building-paper.

Contentment—A Rare Jewel

MANY years ago an English philosopher announced that he would give a thousand pounds to anyone who was absolutely contented. When the applicants for the money came—and there were lots of them—he asked them what they wanted the money for if they were absolutely contented. They went away disappointed but convinced that absolute contentment is a rare thing. Perhaps it didn't exist at all.

Generally speaking, this is a restless age. Railway coaches are full of people flitting about the country. The ocean steamships lug people to Europe, to Hawaii and the Philippines, and back again. All these things make the subject of this story all the more remarkable.

Way down East, or very nearly there, for it is in south central New Hampshire, lives a farmer, his wife and three children who are the nearest to being absolutely contented that we have yet discovered. We will not call them by name, but it is a real family and we have known them long enough and well enough to be sure of our ground in saying they are contented.

The head of the family was formerly a storckeeper in a small town, later a carpenter, and for the last fifteen years has farmed it. He and his wife are in a ripe middle age. The son, who married three years ago, lives in the next house, helps run the farm, and is still considered one of the family. There are two young unmarried daughters—one teaching in a near-by school, and the other helping with the housework. No hired men are kept to break up the family circle, though outside help is sometimes hired by the day.

The farm has two hundred acres, much of which is in rough woodland and upland pasture, and the remainder meadow and cultivated land grown to potatoes, corn, and a garden. The farm borders a small river and has small mountains on three sides.

The principal source of income is dairying. Twenty cows and six horses are kept, which, together with the farm work, keep the men busy fourteen hours a day. The work is hard, the crops are not always successful, markets just fair, and the winters cold.

While all this is not the best foundation for absolute contentment, the home life is. The wife is a woman of high ideals and refined tastes. The house reflects her personality. It is comfortably but not expensively furnished. The meals in such a home are of course good. Running spring water is provided in the kitchen. The living-room contains a piano and a phonograph. The son plays the violin, both daughters play the piano, and the father is an expert with the phonograph. He can put his hand on any of the two hundred and fifty records in his musical library. All the family have good voices, and use them. The head of the house enjoys an evening or two a week over the checkerboard and plays a strong game.

All the family have traveled and know either personally or through good authority the larger cities of the country, also attractions of different agricultural sections.

But they don't want to move. They want to stay where they are. They like their home so well that they don't want to run the risk of trading a bag of gold for a grindstone, if you happen to remember the story of Hans in Luck. They could succeed anywhere, but they aren't anxious to try.

"The air is good, the water is good, and this farm agrees with one pretty well," says this man, "and, besides, I have plenty of elbow room. I'll live here as long as I live and then I'll be hurried here." His

sentiments are seconded by the rest of the family. After all, it is largely the parents' attitude that influences the ambitions of their children.

Think of the hordes of parents that are scheming, pulling, and wriggling to get off their farm and go somewhere, perhaps to the city, perhaps to another farm. Think of the children reared in a home atmosphere charged with such unrest. How can they be contented? Only the strongest and most healthy minds can resist the desire to be constantly seeking a change of location. That is why contentment is so rare and why the family here described was worth discovering and worth telling about.

Buried Treasure

By Berton Braley

LONG have men sought for it,
Lahored and toiled;
Bartered and fought for it
Slaughtered and spoiled;
Plunged into strife for it;
Fearless and bold
Given up life for it—
Deep-huried gold!

Yet all the treasure of
Buccaneer's spoil
Can't reach the measure of
Wealth in the soil.
Why seek a chest of gold
(Doubtless a cheat)
When there's a nest of gold
Under your feet?

True, you must sweat for it,
That much is clear;
Worry and fret for it
Year after year;
Plow land and turn it all;
Give it your care.
Gold?—You will earn it all
Still—it is *there*!

Gold with no shame to it,
Honest and clean;
You may lay claim to it,
Conscience serene.
Gold of fertility
Hid in the soil,
Won by ability,
Patience, and toil!

Co-operative Merchandising

SOME Portage County (Ohio) farmers, under the lead of their county agricultural agent, bought, for last fall's fertilizing, one thousand nine hundred tons of acid rock for \$12.50 per ton laid down at their railroad station. They would have had to pay from four to five dollars a ton more if purchased from their local dealer. This fertilizer was purchased co-operatively and saved the farmers the tidy sum of eight thousand dollars. Further particulars will be furnished by our Service Department.

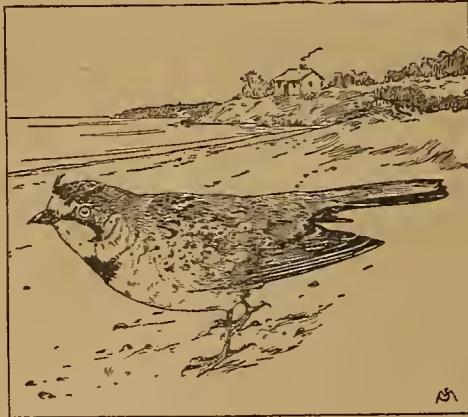
THE people of the United States spend \$800,000 a year for missionaries and two and a half billion dollars for booze, and then wonder at the increase of crime.

Horned Larks

By H. W. Weisgerber

IN SPEAKING of larks, I refer only to the larger members of the family to be found with us only in the winter months, and not to the several subspecies that are found in various sections of our country.

It is the boy who drives the manure spreader when the ground is covered with snow who is most likely to see these sparrowy birds, for when they once find such a field they are likely to remain in



it for weeks at a time, and mornings after a fresh fall of snow they will be waiting for him to come with a load.

The large black spot on the breast, the bright yellow throat, the black line under the eyes, and then the two dark feathers of "horns" that they can raise when excited, should identify these walking birds.

When the flock is feeding they usually have one or more sentinels "on guard," who stand on some slight elevation while the rest feed.

The horned larks gather the undigested grain and weed seed from the manure. Their food consists principally of weed seed, of which they consume vast quantities.

Commercial Use for Soapweed

ACCORDING to a New Mexico exchange, L. K. Egerton and Malachi Hogan each shipped a car of soapweed during the last week of August. The price is not given. A St. Louis company controls the process for utilizing this fiber plant, it is said, and the price is not high, but one shipper had shipped five hundred dollars' worth up to that time. The soapweed is a plant which belongs to the same order as the henequen plant, by which many millionaires have been made in Yucatan. From the henequen comes the fiber of which sisal twine is made.

Soapweed is practically the same as the yuccas often planted in gardens and lawns as an ornamental plant. Its fiber is wonderfully strong and is said to make the finest lariat ropes and many other products. And the yucca thrives on drought. Sometime we may see plantations of soapweed rivaling in extent and profit the henequen plantations of Yucatan. Once planted it is a permanent crop. That marketed now, grows wild on the semi-arid plains.

Fable of the Poor Young Man

By Fred Telford



ONCE there lived a rich Farmer who had a beautiful Daughter. The Girl knew how to manipulate all the Silverware piled beside her Plate at any sort of Function, and one Summer when she went to the Mountains she learned to play Bridge. Every young Man for Miles about

was in Love with the Girl or the Money she would own. But she inherited her Father's Horse Sense and turned down all the false Alarms in favor of a bright Boy with more Sense than Dollars. The young Fellow was quick to hold Hands, but he killed his Engine every time when it came to popping the Question. He knew he could not compete with the old Man in supplying gay Bonnets, and his Heart stopped when he thought of asking the Girl to get Breakfast for the hired Man at 4:30 A. M.

The Girl saw that the good Ship was drifting toward the Rocks and that it was up to her to do some Priscilla Work with this twentieth-century John Alden. So one evening when the young Fellow tried for a Half-Nelson she refused the Clinch and turned the Conversation upon the Joys of married Life. The young Fellow pulled the same old Gag about meeting the Interest on borrowed Money and the Wrong of taking a tenderly cherished Girl from her Father's Roof. The Girl was ready for this old Stuff, and handed him this hot Shot: "Modern Girls don't live on the Roof and Dad paid fifteen per cent. for the Money that gave him his Start." The young Man saw Daylight and the old Man had to dig up for the Trousseau.

Moral: You can't live happy ever after if you never begin.

Where the Graduates Go

HERE are some figures which show what has become of the young men of the past year's graduating class from the Wisconsin College of Agriculture. Since June the twenty-five men accounted for have settled down as follows:

Returned to home farms.....	3
Working on other farms.....	3
In government service.....	3
In commercial work.....	8
Teaching and experimenting...	8
Total	25

We believe this showing is about typical for institutions of this class. It shows parents some of the opportunities for their sons, also the probability of having them return to the home farm.

The Farm Office

By Clifford E. Davis

EVERY farm, however small, should have one corner, or one room, set aside as an office, where plans for crops, business, etc., may be studied out. Such an office can be fitted up cheaply; but the yearly benefits are inestimable. Mine is only six by ten, adjoining the kitchen, where I can consult the family or talk to callers at will.

An old 'squire's desk, with one wide and four narrow drawers, and an office chair is the main equipment. At one side are the catalogues of seed, grocery and other firms. A supply of good ink, a gross of assorted pen-points, a bottle of mucilage, blotters and writing-pad come next, with ruler, eraser, lead-pencils and note-pad for hasty notes of work, etc. Against the wall hang the daily calendar, telephone book of addresses, almanac, hook for sheets of blank paper, mottoes and pictures of farm animals, fowls and fruit. In the big drawer are the farm ledgers; log of important events, statistics of the farm and data; a stencil outfit to print cards, addresses, no-

tices, etc., and various odds and ends. In the other drawers are blue-lined envelopes, bought by the box of 250 very cheaply (thirty-three cents per box), and writing paper in ream lots, etc. Near by are the bulletins on all subjects from agricultural experiment stations, year-books of agriculture and a case of books on agriculture, science, history, politics, etc. The last item is the waste-basket, a half-hushel crate; and near by hang and stand small tools of all kinds. Among the contents of the toolbox is a combination of pliers, wire-cutter and staple-puller that is valuable, and a double-edged saw with fine and crosscut saw edges. Here on rainy days or at night labor is planned, business outlined or recorded, letters written or answered, diseases of farm stock studied or prescribed for, and all such affairs attended to at once.

Only an hour or less each day will keep the hooks up to date, show hills paid, etc.; but the yearly result is immense. One of the mightiest helps is the taking of ten farm, one county, one scientific, and four household papers. From these are gleaned and put in practice all the latest farming hints; but every season brings experiments with crops and culture along new lines in addition.

By planning work far ahead of the day or season, there is no "lost motion," but the work moves along smoothly, each hour seeing its own duties done; and there are few jobs "left over."

Without such an office, the farmer who keeps his receipts in an old cigar-box, his accounts in his head (?) and his work unplanned hardly knows "where he is at"; and both work and accounts soon lapse into inextricable confusion that only the Sheriff's sale can solve. With a neat farm office, farming rises to the dignity of a profession; and the wife should be the junior partner and helper, and her advice neither despised nor ignored.

Putty and Cement for Troughs

By J. A. Raiser

NOT long ago our galvanized watering trough sprung a leak in the bottom, forming a crack about ten inches in length. All other parts of the trough being good, we thought it profitable to mend it. Buying some prepared putty we smeared a thick coat of it over the crack, letting it extend several inches beyond the crack. When we filled the tank with water we found it did not leak a hit any more, nor has it leaked any since.

Troughs made of planks nailed together usually leak in the beginning, especially if the lumber does not fit quite true. We overcome this difficulty completely by filling up the cracks with Portland cement, then filling trough with water. The water hardens the cement and leaks are stopped as long as rest of trough holds good.

Personal Farm Equipment

By R. E. Rogers

WE READ much about farm equipment. Also, much about the personal appearance of the farmer's wife and children. Now are we going to neglect the farmer himself? In accordance with this idea, I want to express a few queries about the farmer's dress while at work, the minor tools he uses, and their condition while using them.

It has always seemed queer to me why a well-to-do farmer would buy an up-to-date suit of clothes, shoes, hat, and so on, for the wear that he can only give them on two or three occasions each week, yet when he sheds these dress-up clothes he puts on a pair of overalls with one suspender remain-



ing, shoes with the soles off, a hat with one rim off, and figures—if he figures at all—that he is economizing. If these clothes were to be worn equally as long as the good ones there wouldn't be so much querness about it. But he *lives* in them. In buying the good ones he looks for every point of comfort and convenience even to the detail of having an extra button sewed on the inside of the coat for an emergency. He will undoubtedly have a heavy suit for winter and a lighter one for warm weather. Yet he'll wear the same overalls and jacket in every kind of weather.

If a hole works itself in one pocket he changes his small change, nails, ruler and knife to the other one, and by so doing inconveniences himself a dozen times a day when he wants to use any of these various pocket-pieces.

In shoes it is a great deal the same. He buys the latest models for comfort and style when purchasing for what he intends to wear two or three times a week, but he will work on the farm, wading through wet grass and treading cloddy ground for weeks, with a pair of shoes that are full of leaks, and whose bottoms are ridged from sand and dirt wedged between the parts of the soles. Many times the strings will be wanting, and a piece of hinder-twine is used in their place.



Now I know and you know that these things don't usually count for much as we look at them. But can a man work in much comfort if he is harnessed up in such a manner? If he is not working in comfort is he doing the most work physically that it is possible for him to do? And if there is anything irritating him, such as a nail in his shoe, will he be apt to develop as much mental energy as when all his clothing was comfortable in every way? And isn't every little bit of brains needed for carrying on a successful farm these days?

But now some more things. I knew, some ten years ago, a thrifty farmer (outsider's view) who drove a fine-looking rig, wore good clothes and presented the appearance of thrift in every way, yet he was discovered hoeing a corn-field one day with a grub-hoe, and he admitted that he hadn't had time to get around to buying a hoe.

Yep, he made money. But I wonder if he didn't earn the five or ten hours of pleasure a week at the expense of comfort for the remaining time?

Did you ever visit on a farm where there was a gate out of order that could be fixed up in five minutes' time so that it would swing? Yet it was used a dozen times each day and caused the farmer to pause in his trip to lift it open, or if carrying something force him to set it down, while the time used in these interruptions would easily repair it many times?

Of course I might run on for twice this length with instances that have happened and are happening. Most of these things are within sight of our farms. Any of them can be seen every day on farms where you go. But are they on your farm?

Harness Snap as Bell Clapper

By H. M. Henderson

WHEN the clapper drops out and leaves the ring in top of a bell, take a harness snap (a one-inch bolt snap is best) and snap in the ring. It can be done without removing the bell from the animal.

NATURE teaches us to love our friends—a simple lesson in primaries. Religion teaches us to love our enemies—a difficult lesson in higher education.

Find the Hidden Water

By Jacob J. Minnick

SOON after I bought the farm where I now live in Oregon, I noticed a few rushes on a hill five hundred feet from the house. I made a hole with a post auger and found plenty of water. I then dug a well at that place five feet in diameter and ten feet deep, installed a siphon and piped the water to a trough in the grove shown in the picture.

My horses, cattle, and goats come here and drink at will. They enjoy the shade also. There is no expense of maintenance, no engine or windmill to look after, and the water is pure and plentiful. The waste water is piped about forty feet farther on for a hog wallow which requires no attention and is thoroughly enjoyed by



The watering trough is fed by a siphon from a hillside well

the hogs. I cite this experience to show the value and low cost of developing the natural conveniences and resources which are overlooked on many farms

Power House and Granary

By Alonzo Price

THE size of the building pictured in the next column is 12x24 feet. It is provided with a 12-foot eave. The crib is at the north end, and is six feet wide and goes to the roof. The granary is over the engine room and is 12x18 feet and five feet deep. The room for the engine, etc., is 12x18x9 feet.

The end next to the crib contains the crusher, next is the sheller, and then the engine with sub-well and pump in the south-east corner of the room.

The machinery is operated by a three-horsepower gasoline engine. The sub-well is thirteen feet deep and is about five feet above the supply well. The supply well is eighty-two feet from the building. The sub-well is three feet square, the walls being of concrete eight inches thick. The grinder is a six-inch burr. The floor is of concrete six inches deep. The foundation is concrete. All concrete parts are one part cement to six of gravel. The floor is underlaid with gravel about eight inches deep.

The size of the door by the engine is 7x7 feet; the large door near the crib is 6x7 feet. The windows over the engine room on the front side are three feet square; one window on the east and one on the south side of engine room are each 18x20 inches. The studding are two feet apart. The size of the studding is 2x5 inches; joists 2x8 inches.

The cost of building, not including machinery, was \$185. The cost including the



Isn't it worth the \$415 spent?

building, engine, sheller, grinder, piping, fourteen-barrel tank, pump pulley and shaft, was \$415.

One Winter on the R. F. D.

[CONTINUED FROM PAGE 4]

But we did get out of it. Just how, it is hard to describe; but I think it was mostly due to the words of the unknown passer-by. It put new fire into me and reconciled me in walking the rest of the distance in order to lighten the horses' load. Finally reaching our warm quarters, I found the ankles and shanks of my poor horses literally cut to shreds from their contact with the sharp, jagged edges of the frozen mud. I have always fancied I could see much gratitude in their eyes next day, when they were not compelled to leave their stalls.

Good Country Roads Improve the People

If the shadows were frequent at first, the sun beamed just as often later. After the winter had spent its fury there came a period of soft, dreamy April and May which gave one a fresh vision of the earth and nature. With the first warm days of spring I forgot that I had ever experienced dreary discomfort, cold feet, and swollen tonsils. It is surprising how effectively warm sunshine and good country roads dispel bitter memories and inspire light and hope. You can almost tell the nature of a farmer's disposition by the condition of the roads over which he must drive, and I am sure the brighter and better conditions improved mine.

In April I had a birthday, and it seemed to me then, as I am convinced now, that I never before passed such a happy day. The bitterness of winter had been overtaken by the sweetness of spring.

When the roads became smooth I indulged in the habit of reading such magazines as came unwrapped for my patrons. In their selection of magazines to read I found my patrons exercised good taste.

One comes to know the women and children along the mail route first, principally because the men are at work, and it is with the women that one has most to do. We often gave the mail to the little ones in the country, though it is not the rule followed in the cities. But I could not close my eyes to the fact that mother needed the rest which the little one's toddling to the letter box afforded her.

The Bond That Was Holding Me

About June 1st I determined to give up the mail route to take up work in a large city. But there were inducements which tended strongly to hold me to the work. These were not only the summer delights of riding and singing and reading through the country, but the friendships and confidence of the people of the route.

The young children seemed to have a tighter grip on me even than the adults, for my desire to go was a good deal weaker when the chubby, healthy-complexioned little tots, to whom I often brought the only candy they were allowed to eat or could afford, ran out daily to meet me and receive their portion of mail.

Word of my intention to go to the city passed quickly around the circuit, and then I realized the full meaning of my friendship with the families whom I served daily. It was then that I found how many were my friends—awaiting me at their letter boxes. One little girl who always looked forward to my coming prepared a surprise for me. She had placed a soiled, folded note inside the box and weighted it down with a very large piece of homemade candy. I espied her shining blue eyes and curling hair at one corner of the house, but she would not come when I called. Farther down the road her father explained she had insisted upon scrawling the note, which meant to ask me, "Please not to go away." The candy was a happy though tearful afterthought, he said, purposely designed, as I had suspected, to lure me away from the big city.

These then were a few—only a few—of the compensations which made up for the fearful roads, the biting winds, and the long hours of that severe winter.

Overproduction

By G. Henry

WHEN there is so-called overproduction it means that the people can't buy back what they have produced.

Say it again: It means that the people have made more shoes than they have money with which to buy shoes—for there are always those who need shoes.

It means that we have raised and killed and put on the market more hogs and beef and sheep than we have money to buy.

It means that we have manufactured more suits of clothes than we can purchase.

So the logical conclusion is that those who do the producing should be paid more for doing it, and then they could buy back what has been produced.

There could never be another panic caused by "overproduction" if the people were paid justly and honestly for doing the producing.

The Dump-Cart—Second Best

By A. Cornell

NEXT to the manure-spreader, the dump-cart is certainly the best way to dispose of the manure problem. For a small farm with necessarily small yards calling for daily cleaning out, I am not so sure that the strong, serviceable dump-cart can be beat, even by the manure-spreader itself. Of course there is always the objection of dumping the manure in heaps.

I took a three-inch hind axle of an old wagon and made a pair of strong shafts to go from the upper side of the axle forward eleven feet, bolting a strong cross-piece, to which I attached the singletree, three feet seven inches from the center of the axle. I then braced this framework with half-inch iron braces running from each end of this crosspiece to the bolt that projected below the axle at the opposite end of each diagonal. This made the gear sufficiently rigid.

I made the box of soft pine boards one and one-half inches thick by twelve inches



If you haven't a spreader, then this

wide. It is seven feet long, twelve inches deep and three feet six inches wide in front and three feet eight inches wide behind. It is hinged to the axle by two pairs of seven-eighths-inch double eye-bolts. The bolts that go into the box are four inches long, passing through a two-inch bed piece and the floor of the cart. Those that go through the axle are ten inches long and pass through the end of each shaft and on through the axle and the diagonal brace iron. The box is two inches longer in front of the axle than behind, which I find is sufficient to bring it down in place after it dumps.

If you have sacks which you intend to put away cover them with sulphur, as it tends to keep the rats and mice away. Be careful to keep away from the sulphur-dust when taking the sacks out again however, for it is very irritating to the eyes, its effects resembling a bad case of hay-fever.

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Crops and Soils

He Boasteth

By Chas. B. Driscoll

SAID Stephen Crow the other day, "I think I've got the finest hay in this or any other State. I tell you folks, it's something great. You know my horses—great big brutes, three times as big as William Toot's,—well, sir, if you'll believe my tale those horses (which are not for sale) were worked within an inch of death and practically were out of breath when I had finished raking hay out in the meadow land to-day. And I suppose the finest rake that any factory could make is that one that my boy and I went east a month ago to buy. And yet the team was almost dead from raking hay as light as lead.

"I've never seen since I've been born the equal of that field of corn that I was telling you about. It seems I couldn't do without the best corn in the neighborhood. My crops, somehow, are always good. Now there's my stand of Shanghai oats, my flocks of pigs and mountain goats, and those white hens my wife and I went to Jerusalem to buy. Could better pigs and hens be found in all the countryside around?

"I ask you just as man to man. Give me an answer if you can. Could you find better pigs and oats, roosters and hens and billy goats if you should travel to the pole? My friend, just listen. Call the roll of all the farmers in the world, wherever Progress has unfurled her banner to the passing blast, and make them answer short and fast this question, 'All ye farmers ho! Who can compete with Stephen Crow?' I seem to hear each farmer sigh, 'Alas, alackaday, not I!'

I think there were about a score of farmers in the barber's store when they began to hear from Steve. And as each one arose to leave put on his hat and closed the door Steve only preached the louder. Sore and cussing quite a little bit, each barber folded up his kit and left the place. So very fast the crowd diminished that at last Steve stood there talking to the cat about his cows and such as that.

At length he talked himself to sleep. Next morning when he came to sweep the porter found him sitting there, talking away into the air about his newest Damson plum. Thinking the visitor a bum, the porter dumped him in the street. They say his ruin was complete, but when they got the ambulance and Doc had said, "He has a chance," Steve grimly looked the sick cart o'er from end to end, from top to floor, and mumbled, "This is quite the best that any factory sends west."

Gates That Give and Take

By C. T. Weber

THE advantage of this flood gate is that it will not wash out. When the flood comes against the gates they swing around by each bank, allowing drifts to pass with-



out damage. By hanging the gates to trees or posts which lean up-stream they will swing back into place as water goes down.

A New Cotton Weevil!

ONE cotton boll weevil would seem to be plenty, but the United States Department of Agriculture has found another.

It is a dry-country weevil too. It is found feeding on a wild cotton-like plant in Arizona. It has not been found on cultivated cotton as yet, because little or none of this crop has been grown in its native habitat; but it attacks the bolls of the field cotton when given a chance in experiments. In view of the fact that there is a movement on foot to plant a great deal of cotton in the irrigated regions of Arizona, this new pest is rather a startling matter.

The well-known boll weevil of the South is not adapted to dry conditions. It has not made much headway in working west into the semi-arid regions of Texas and Oklahoma. But if the Arizona weevil can adapt itself to dry-farming conditions it would seem that there is danger of its spreading over the ground which is too dry for the Mexican boll weevil, thus making a clean sweep of the entire cotton belt. The government experts are studying the problem, and it is hoped that they will find ways for coping with the new weevil where it is found and guarding against its spread.

Nothing is more serious than the breaking from its environment of a new insect pest. The Mexican boll weevil and the Colorado potato beetle are good examples. The potato beetle fed harmlessly on wild

plants until it found the potato plant. Then it became a menace, and will always be a source of damage.

Dodder, or Love Vine

OH, HOW cute! The cute little thing is a vine. It is yellow and hasn't a leaf to its name, and winds about the stem of a weed in the most affectionate manner. That's why it is called "love vine." Have you ever noticed it? Surely you have. You will see patches of wild growth along some brook covered with it until the whole thing looks like a mass of yellow hairs. On some streams, the Potomac River, for instance, it may be seen in pretty yellow patches on the sandbars quite covering all the herbage. Some in your alfalfa or clover field? Then get busy at once. The pretty little yellow leafless vine is dodder. It is a parasite and sucks the sap from the plant it winds about—like some forms of so-called affection in human affairs. If there is only a patch of it here and there cut it with a scythe, close to the ground, and carry off the crop and dodder together and burn them. If the whole field has become infested plow it up and resow with another crop. And have your nearest school provide itself with a glass with which to examine the next seed you sow to see whether or not it has dodder in it, or send a sample to your agricultural college for analysis. It is a bad weed, if it is interesting.

ALFALFA-GROWING is easy in Kansas and many other States. It's harder in the North, East, and South, at least most of us think so. If such of our readers as have grown alfalfa successfully in States where its growth is supposed to be difficult will write us their opinions and experiences, we shall be greatly obliged, and may be able to publish some of the letters.

Which Way is Best?

HOW many times have you ever asked that question of yourself? And how many times have you let the question pass unanswered, because you had no facts to point you one way or the other?

It is well sometimes to experiment in a small way on some of the perplexing questions before entering in a large way into the production of crops, live stock, or other farm output. Sometimes, if we keep our eyes open, we get workable ideas from experiments Nature herself has performed.

It pays to observe. One Ohio farmer has, in his case, proven this to be a fact. He writes as follows:

We have just completed a two-year supervision over a field of twenty acres. During the early spring of 1912 a field of clover sod was deeply broken and planted to corn. The soil being very even and in fine tilth was easily cultivated and grew an immense crop of corn.

In September the field was divided into two even parts by a temporary fence. A bunch of hogs was placed into one part. Two hundred and twenty shocks of corn, twelve hills square, were put into shock upon the other at a cost of 7 cents per shock, \$15.40. This field yielded 680 bushels of corn, costing us \$34 for husking. We had 220 shocks of fodder worth, for feeding, \$22, and we sold the crop of corn for \$374 at our elevators six months after cribbing and after paying taxes upon it. The field in corn netted us \$396, nothing counted out for our labor or taxes.

The hogs, 63 shots weighing 80 pounds each, converted the other ten acres into a park. The hogs were marketed at 8½ cents. They made a gain of 140 pounds each, or a total gain of 8,820. The bunch netted us \$749.70. No labor was expended save supplying water. They consumed all the fodder as roughage save the coarsest of the stalks. When the field was disked for oats this past spring not a weed showed in the hogged-down plot.

Drought hurt our oat yield and catch of clover, but we had something coming we did not know of until near cutting time. Weeds, plantain, white top, and crane bill choked out the oats badly on the husked portion of the field. So we thrashed the two plots separately to find the result.

The husked-off plot made about a half ton of straw per acre full of weeds and filth, and yielded 230 bushels of oats worth \$92 at thrashing. The hogged-down plot yielded 440 bushels, worth \$176. Pretty much of this gain we credit to the hogs in their thorough work of ridding out the noxious weed roots and plants.

Then we have another credit for them. The manure from the corn crop was evenly distributed over the field in gathering the crop and we got the benefit of this in a fine even stand of clover, while the husked-off end was not only robbed of the fertility but a good thrifty stand of clover as well.

This experience was valuable for this one man and may be of value to others working under much the same conditions. But there are many problems we must settle for ourselves as we meet them. Our soils, our climate, and our markets must answer our questions, if we ask them.

The Owl and the Quail

By Ramsey Benson

AQUAIL, being shot at by a hunter and narrowly escaping with her life, took refuge in a thicket, fainting with fright. From a tree overhead an owl looked down upon her sardonically.

"You are very silly," he remarked, "to allow yourself to be hunted so when you have the means of defense ready at your hand. If you were to stop killing the insects that prey on the wheat and the corn man would speedily perish of starvation."

The quail thanked him civilly for his advice. "However, if you don't mind," said she, "I think I prefer to go on doing what is so evidently my duty, let others do as they may."

Covering the Weeds

By Paul Schnoor

TO COVER weeds, corn-stalks, and the like, when plowing, just take a light chain (A) about three feet long and fasten on beam. Then take a piece of rope (B)



and fasten from chain to donbletree (C), and you have the best method of covering weeds. Lengthen or shorten rope so that the chain just runs over the ground as it is being turned over by the mold-board.

Getting Results in Crop Yields

SOME experience in New Jersey is worth studying when we are figuring on the question of whether it will pay or not to plow down green manure. For four years plots of wheat and rye were used in this experiment. Some plots were sown to cowpeas which were sown in mid-July and plowed down in mid-September in time for the fall sowing of the grain. Other plots were sown without the plowing down of the cowpeas. All the plots were given a dressing of acid phosphate and muriate of potash. No nitrates were applied. The idea was to get the nitrogen from the air with the cowpeas and see if it paid. The land was continually cropped to rye and wheat for four years. At the end of that time the plots given the green manure were producing ten bushels of grain per acre more than those deprived of the cowpeas, and proportionately more straw. And the plots favored with the green manure had in the soil enough more nitrogen per acre to be equal to nine hundred pounds of nitrate of soda in the top six inches. It cost \$4.50 per acre per year to get these results in crop yields and improved soil.

A Plea for the Crow

THE U. S. D. A. experts have been prying into the private habits of the crow, and find him possessed of some very good qualities. One agent of the Department watched a crow fooling about the growing corn and shadowed him to his nest. There he found the young crows full of cutworms instead of sprouting corn. The crow had been misjudged. Another victim of circumstantial evidence. These ornithological detectives have come to the conclusion that, while the crow does kill a great many young birds and steals other birds' eggs, he eats so many grasshoppers, cutworms, white grubs, and other injurious insects that on the whole he is a very valuable bird to farmers if his numbers are so kept down that the normal crow food is sufficient. When some scheme is devised for making the crow disinfect himself of hog-cholera germs before migrating from an infected farm to another, we shall espouse his cause. Until then we shall encourage every plan for keeping his numbers down to the point where the supply of normal food will be a great plenty. Much obliged to the experts, just the same, for their very useful information.

A MIGHTY good little bug has been found in Kansas. It lays its eggs in the eggs of the chinch-bugs with ruinous effect—to the little chinch-bugs. More power to its ovipositor!

WISCONSIN has produced fireproof shingles, but the cost of production is fifteen dollars per thousand. The need for such shingles is evident, and when they get cheaper we will begin to use them.

The shingles are made fireproof by the use of chemicals such as sulphate of ammonia and phosphate of ammonia. The shingles are placed in cylinders and subjected to pressure which forces these fire-resisting substances into the wood.

The man who sees more beauty in a sunset than a sunrise is not likely to be a farmer. He will be a man who never gets up in time to see the sun rise

Live Stock and Dairy

Moving Day for the Calves

THE problem of moving calves from one farm to another, or to a railroad station, still remains to be successfully solved, but the wagon shown in the picture comes very close to the ideal way. The reach of the wagon is lengthened about four feet. The calf rack is constructed chiefly of four by ones, and will comfortably accommodate a dozen calves. Compared with driving calves on the hoof this method



We're off for pastures new

saves man labor as well as making the trip easier for the calves.

Small cleats are nailed to the floor of the rack to give the calves a secure foothold. This is important if the road has many hills. A middle partition is of advantage to prevent the calves surging back and forth.

The calves in the picture are pure-bred Holsteins and showed no indication of discomfort at the end of their journey.

The Big Cow and the Small

A TENNESSEE dairyman years ago had a cow which claimed the championship of the world. She was a little cow, but her mess of milk was big. "You can pick her up and tote her," declared the man who milked her, "and then you can set her down and milk her, and you can't tote the milk." But when we put cold statistics over against enthusiasm, we find that the big cow seems to pay better than the small one, other things being equal. At least, according to Palmer of the North Dakota station, that is the result of some Wisconsin experiments carefully conducted. On the average, cows weighing nine hundred and under paid their owners annually \$54.20 more than their keep. Those weighing between nine hundred and a thousand paid their board and \$61.36. The excess of income over expense of feed of larger cows was \$66.28 from the thousand-pound cow up to eleven hundred, \$72.21 from that point to twelve hundred, \$72.01 in the next hundred, \$79.64 between the weights of thirteen and fourteen hundred, and all cows weighing over fourteen hundred averaged their owners an income of \$88.01, annually, above the cost of their feed.

This must not be taken to mean that a big cow is always better than a little one. A small cow of a good line of breeding will outyield a scrub. A Kerry cow weighing six hundred will outyield a Hereford weighing fourteen hundred, in actual quantity, probably, and certainly in profits over feed consumed. But Warren in his book on farm animals says that the large animals of any breed are much more economical of labor and barn room than the small ones of the same breed, and usually give as much or more milk for the feed eaten.

Right and Wrong Feeding

IF MEAT were made by machinery we can think of its being done by the putting of grains and hay in a hopper, starting an engine, and taking out meat at the other end of the machine.

A man running such a machine would have to have a recipe telling just how much corn, wheat, roots, oats, hay, straw, silage, and other things to put in. This recipe would tell him that if he put in nothing but corn the machine would not make meat. He would have to put some beans, peas, alfalfa, clover, or other protein feed to balance up the carbohydrates and fats in the corn.

An animal is such a machine. But it will work after a fashion without any recipe. It eats enough of the unbalanced ration to supply what is needed of the scarcest element, if it can. It disposes of that part of which there is too much, either by wasting it into the manure pile or in some other way.

In these days of keen competition no feeder can afford to feed by guess. He should know pretty nearly what the feeding value of his ration is. If it lacks protein he should make some kind of trade or purchase so as to get more protein into it. If it has too much protein the case is just as bad—may even worse, for protein is the most expensive part of the feed. He can sell his protein and buy carbohydrates.

The best feeders know very accurately what their feeds carry. It is easy to learn, and every farmer who desires to do so could know if he would buy a good book like

Henry's "Feeds and Feeding" and use it as his recipe for running his meat machine. A great many of us, however, do not like to do this sort of digging in books, and in such cases we should have the ration worked out by someone who does like it.

In this office we are almost always able to calculate a fairly well-balanced ration for our readers if they write us telling what feeds they have, the stock they are feeding, and the prices of other feeds in the neighborhood. And we are always glad to serve in this way.

Every rural school ought to be equipped with books, knowledge of prices, and ability to work out balanced rations for the live stock in the neighborhood. It would be fine educational work and useful to the feeders.

The Best Farm Churn

By H. F. Judkins

THIS article begins a series of short discussions which will point out some of the most important things connected with farm butter-making. The author is an expert creameryman formerly in the government service, and he has written these articles especially for the readers of FARM AND FIRESIDE.—EDITOR.

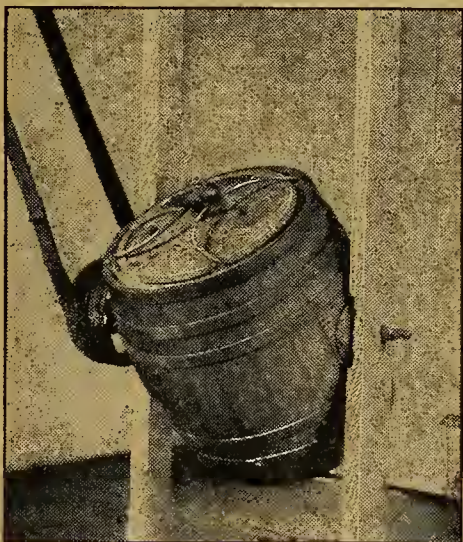
With churns of the dasher, swing, box, barrel, and various other types in the market, the farmer is confronted with rather a difficult proposition when he wishes to buy a churn. The two factors he must decide upon are the type and the size of the churn needed for his use.

Concussion is necessary to get the fat globules in the cream "knocked together" in the form of butter. That is, the cream must rise and fall or be splashed about in the churn so that the fat globules collide with each other and the sides of the churn until the butter finally comes.

Dasher Churns Undesirable

While the old-fashioned churns employing either a vertical or rotary dasher give concussion enough, they are undesirable to use for several reasons.

A large amount of fat is always lost in the buttermilk, hence they are wasteful. As soon as the churning begins, the sides and sometimes even the cover of the churn are covered with cream, and to get even fairly good results you must use a case knife or a



Mechanical power takes the drudgery out of farm butter-making

butter paddle to scrape the cream down occasionally. Even then there is sure to be some cream sticking in some of the many crevices of the dasher when the butter comes. This incomplete churning is the chief reason for the high-testing buttermilk. Then, too, some of this unchurned cream may not be drawn off in the buttermilk, but shows up in the butter in the form of streaks.

The butter never comes in the granular form, as it should, but in a lumpy mass, with more or less buttermilk incorporated in it which is difficult to wash out. If the cream is very thick, the dasher serves to "whip" it, and before you are aware you have churned a salty, streaked article hardly worthy of the name of butter.

Lastly, more labor is involved in washing the parts of the dasher churn than any other churn.

The Swing and Box Churns

The swing churn comes nearer to what is desired, but often prolonged churning is necessary, since the concussion is not very great, particularly if too much cream is in the churn and the operator does not swing it violently.

The box churn has the slight disadvantage in that it has so many corners in which cream may collect. A great deal of labor is required to keep it clean.

The Barrel Churn the Ideal

The barrel type of churn is ideal because the disadvantages of the others are for the most part done away with. Great agitation is secured, since each time the churn is revolved the cream falls and is completely inverted. The butter comes in a beautiful granular form, and the loss of fat in the buttermilk is kept down to a minimum. The churn is easy to keep clean, is quite inexpensive and seldom gets out of order.

The barrel churn must have nearly straight sides, so that when it is turned the cream will not simply roll around in the churn as it would if the churn had too much bulge.

The barrel churn is a little more expensive if a supporting frame is purchased with it. A handy arrangement is to support the churn between two permanent four-by-four-inch uprights.

The Question of Power

It is not very desirable to use hand power if much butter is being made. The matter of power depends largely on what is available. The electric motor is ideal. Other practical kinds are gasoline, steam, and tread power.

Having decided that the barrel churn is the best type, the matter of size is not difficult. The farmer should get a churn large enough to handle his business when it is at a maximum. The possibility of his enlarging his business in the future should be borne in mind, as should the fact that with proper cooling facilities it will at no time be necessary to churn as often as once a day, and probably not oftener than once or twice a week in winter. To get the best results the churn should not be filled over half full. Hence, if you are producing sixteen gallons of cream a week and are churning twice a week, you will need a twenty-gallon size churn—better that it be a little large than too small.

No Cure for Advanced Garget

By Dr. A. S. Alexander

A READER of FARM AND FIRESIDE residing on a New York farm writes: "I have a cow that freshened two weeks ago. For two days her udder was all right, but on the third day her back legs seemed to stiffen, and her udder became feverish and caked. What cure will be effective? I have tried several home remedies. She has lost one quarter; I fear she will lose all."

As your cow has had a bad attack of garget, from infective matters getting into the teats, and has lost one quarter, you should sell her for immediate slaughter, or sell her to the butcher as soon as the milk she gives does not prove profitable. Such cases are incurable, and an affected cow may spread the disease to other cows. Keep her by herself and milk her last, or have her milked by someone who does not milk the other cows. Rub the caked quarter with iodine ointment every other day.

If you ever have another cow similarly attacked give her at outset of attack a pound dose of Epsom salts, along with half an ounce of ground ginger-root and a cupful of blackstrap molasses in three pints of hot water as one dose. Follow with half an ounce each of saltpeter and fluid extract of poke-root in water twice daily. Foment the udder for hours at a time with hot water, and then rub well with a mixture of equal parts of sweet-oil, or soft soap, and fluid extracts of poke-root and belladonna-leaves.

Humane Slaughtering

IN A RECENT news bulletin of the United States Department of Agriculture it is stated that the three methods of killing animals among civilized peoples are bleeding after stunning, bleeding after "pithing," and simple bleeding.

"Pithing" is a new word to most of us. It is an operation performed by sticking a knife between the base of the skull and the first vertebra into that part of the spinal axis called the medulla.

The government officials having in charge the enforcement of the laws against inhumane treatment of animals seem to feel that this custom is indefensible, for they say that "neither consciousness nor sensibility is immediately destroyed." Stunning is said to "meet the demands of humanitarian sentiment and of hygienic requirement." Doubt is expressed as to the correctness of the claim that stunning prevents thorough bleeding. Nothing is said in this bulletin as to the prevailing custom of slaughtering hogs by hanging them up by the hind legs, sticking them, and allowing them to bleed, but the inference is plain that it is regarded as cruel. Nobody who has ever seen the operation can think otherwise. Stunning would cost money, but cruelty costs more than money will repay.

THERE is no luck in swine-growing. Success is the result of careful plans faithfully executed, and failure, as a rule, the result of no plans.

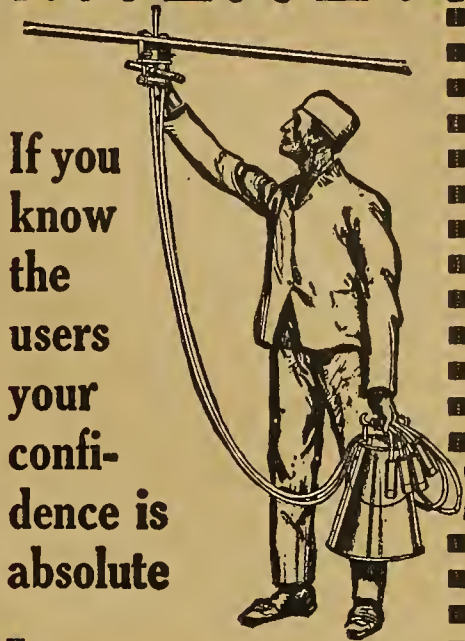
Good Results with Skim Milk

By Laura M. Chase

THE pure-bred Ayrshire calf in the picture is an example of what a skim-milk diet will do for young dairy stock. The calf was fed skimmed milk when it was but a few days old, and skim milk has been the greater part of its ration ever since. Lately the calf has had oats and hay, but she has never been pastured. When the photograph was taken the calf weighed 204 pounds.



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Poultry-Raising

Two Strong Wire Doors

By B. A. Black

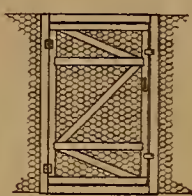


Fig. 1

erred with well-stretched wire netting these doors will not sag.

The first door, shown in Fig. 1, is the more substantial, due to the greater amount of lumber used in its construction; 3x1 inch strips are used throughout.

For gates or openings more than three feet wide this type of door is especially good. For smaller doors the construction shown in Fig. 2 is entirely satisfactory. One thing that makes these doors so efficient is the bracing. Many doors lack this.

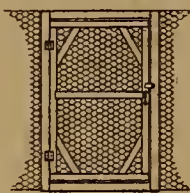


Fig. 2

My First Operation

By Jennie R. Thuma

I AM not a surgeon, only a woman with nerves, yet I performed an operation that for novelty and daring I think surpasses the one entitled "Cropbounditis," by B. F. W. Thorpe, in the August 30th issue of FARM AND FIRESIDE.

I had a Barred Plymouth Rock pullet that I noticed was stretching her neck and making all sorts of contortions. Upon examination I decided to operate on her.

I caught her, tied her legs and wings securely, got my instruments, and was ready for action. I made the first incision, which commenced to bleed. This scared me, and I quickly sewed it up. I realized the pullet would surely die, so I opened the incision again and made the second one and pulled out a strip of leather six and a quarter inches long and six and one-eighth inches wide.

My heart was beating pretty fast by this time, but the operation was on and I was bound to finish. I bathed the wounds with a solution of carbolic acid and water, then sewed up the incisions with silk thread and put the fowl in a coop, alone. After twenty-four hours I fed her lightly for five

days, then I put her with the flock, and to-day she bids fair to become a paying member of my chicken family.

EDITOR'S NOTE: In order to make clear just how these large pieces of leather were swallowed by the pullet, we asked for fuller explanation. Pieces of leather were cut from the uppers of old shoes, for fastening rosebushes on a trellis. Some pieces not being needed were thrown on the ground, and after a rain, while soaked and soft, were eaten by the pullet with the results described.

Depluming Scabies Cured

A NEW MEXICO poultry-woman had her whole flock of poultry infected with this highly contagious disease, depluming scabies, by the introduction of a rooster affected with this ailment into her flock. Various remedies were unsuccessfully tried, among them tobacco and soap solutions, into which all the birds were dipped. This dipping of the birds caused the death of the rooster from effects of the chill induced, but failed to cure the disease.

She then submitted her case to FARM AND FIRESIDE and an ointment composed of flowers of sulphur, one dram, carbonate of potash, thirty grains, mixed with one-half ounce of lard or vaseline, was recommended; or the liquid remedy, one dram of creolin, two ounces glycerin, one-half ounce of alcohol, one-half ounce of water, either remedy to be thoroughly rubbed into the skin over the entire body of the bird once every four or five days until the disease was cured. Her experience follows:

I used the remedy (the formula for which you so kindly furnished) faithfully for several weeks. It was so severe that two hens died from the effects of the second application. All of them stopped laying for three weeks. Previously the disease had not interfered with their laying at all. Later I used sulphur and lard, without the carbonate of potassium, four or five times, and since then have anointed four or five of the most obstinate cases with carbolized vaseline, but have stopped doctoring all of them now. While there are several that still look red on the bare places, most of them have grown new feathers where they were depilated, and the others are beginning to do so. I feel sure the disease is under control.

I found that it was too severe on the hens to use the remedy oftener than once a week, and so did not apply it in less time, after the second anointing. I also found it more difficult to cure the roosters than the hens. My oldest hens were not so badly affected as were the young ones.

Here is an excellent illustration of the necessity of vigilant, persevering attention in order to overcome the diseases of poultry. Medicine sufficiently strong to destroy the mite burrowing in the skin interferes with egg production and occasionally causes the death of birds weakened by the disease or previous treatment.

Double-Headed Door-Button

By Cecil Besse

IT OFTEN happens that you want to close a door behind you and you can't because the button is on the opposite side of the door. This trouble can be remedied by making a button like the one in the sketch. For the spindle (A) take a short wooden strip three inches wide and an inch thick. Leave one and one-half inches on the end, and from there on make the spindle. Whittle it perfectly round, three eighths of an inch in diameter and an inch longer than the partition through which the spindle is to pass.

For the button (B) take a block two inches wide, four and one-half inches long and one inch thick. Smooth off the ends, then bore a three-fourths-inch hole in the center for the spindle. Bore hole through partition, drive in spindle, insert in hole in button, drive a small nail through button to prevent its slipping around on the spindle, and your button is complete.

How Do You Test Eggs?

A hen's time is too valuable to let her sit on eggs that won't hatch and it is poor ethics to sell eggs unfit to eat. We want to publish a page of the best methods for telling the fertility and age of an egg by tests that will not harm the egg.

You are therefore invited to write within the space of 300 words your best egg-testing device and how you use it. Preference will be given manuscripts illustrated by sketches. A five-dollar prize awaits the winner of the contest, and one dollar each will be paid for all contributions published. No manuscripts will be returned unless requested and accompanied by stamped, self-addressed envelope.

Address the Poultry Editor, Farm and Fireside, and mail your contribution before the close of the year.

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Garden and Orchard

Onions from Seed or Sets?

AN OREGON reader asks whether he could raise large onions by sowing seed in open ground, or whether he would have to plant sets. Under favorable soil and season conditions large onions may be grown from seed sown in early spring in open ground, almost anywhere in the Northern or Western States. But early sowing is essential. Ground must be rich and preferably a good (if possible sandy) loam. Thorough cultivation should be given, and the onion rows also be kept free from weeds, and the onion plants thinned, while young, where too thick in the rows. In a locality without summer rains irrigation may be needed or useful. This is the way to raise good dry fall bulbs. Larger onions, however, can be grown by starting plants under glass in January or February (in countries with a milder climate even in the fall outdoors), and transplanting the seedlings in early spring to open ground, making the rows twelve or more inches apart and setting the plants a few inches apart in the rows. The large sweet Spanish onions, such as Gibraltar and Prizetaker, are particularly suited to this method. I usually have the ripe bulbs of these, often weighing a pound apiece and more, along in August and September, and find them profitable. Farther South, the potato onions, so called, are much grown. The sets are planted for large onions, and the large onions for sets. Here we plant sets only for green or bunch onions, seldom for dry bulbs. The sets are expensive, and we have cheaper ways of growing onions, both for green bunching and for dry bulbs.

Plants for Early Tomatoes

To have ripe tomatoes at the earliest possible time, from plants in open ground, I have always found it necessary not only to select varieties of the early type, like any of the strains of Earliana (Floracraft, Maule's Earliest, Northern Adirondack, etc.), but to start the plants under glass quite early, say in February. As I hardly ever set a tomato plant in open ground much before June, the plants have a long time for growth under glass, and unless they are given a great deal of room during the later stages of growth the longer days and the warm sun will force a spindling growth that is not desirable. The plants here shown were transplanted into wooden or so-called veneer boxes four inches in cube. By repeated transplanting, and spreading the boxes with plants somewhat apart, we may be able to grow a strong stocky plant like the one shown at the right. If I have plants like this I do not top them. The tendency of such a plant, however, will be to produce one blossom cluster, set two or three specimens of tomatoes, and bring them to early maturity. This then holds the development of side branches with more fruit clusters back to some extent. The plant shown in the cen-

can be set in good strong or well-enriched soil in the open ground in early spring. The plant seems to require a long season, but it is well worth patiently waiting for. The character and general appearance of the plant is well shown in the picture. The little sprouts develop in the axils of the leaves, and when ready for harvest (cutting or breaking off) the leaves are easily pulled off from the lower portions of the stalk.



They must be set out in early spring

leaving the sprouts closely set all around the stalk. The general cultivation, distance of planting, etc., is about the same as cauliflower or late cabbage. I make the rows three feet apart and set the plants two to three feet apart in the rows. The seed from which these plants were raised came from Long Island, New York. When preparing the sprouts for the table have them parboiled to remove the somewhat bitter flavor.

T. GREINER.

WE CAN spray liquids on our trees and plants and kill many insects, but we cannot kill all. The New Jersey Experiment Station calls our attention to the soil-infesting insects; wireworms, white worms and cutworms. They are to be controlled by working the soil properly and planting crops at the proper time.

Winter Care of Meter Roses

By A. T. Erwin

THE Meter Rose, though highly prized, is not as hardy as some other varieties, and requires good protection to bring it through the winter. The fundamental purpose of winter protection is not to keep the cold out, but rather to keep the frost in. In other words, with many plants it is not so much a question of extreme cold as of fluctuating temperatures. The latter is very destructive to plant life.

Straw, pine needles, or any material of this kind may be used, but one of the most convenient and satisfactory methods is to cut the stems back to within one foot of the ground and bend over and cover with a foot of earth. Leave the cover on until late in the spring—that is, until it is necessary to remove it on account of growth starting.

The Trick of Tree Surgery

THE services of men who can do things well are constantly in demand wherever they live. We are entering an age of agricultural specialties or farm trades. Those who enter the field first will have a good start ahead of the young men who wait until the trail has been blazed for them.

The following account points to a specialty developed by one boy with insight into the future. It requires vision to take hold of undeveloped lines of work and make specialties out of them.—EDITOR.

Scouting an increase in the cost of city living and anticipating a demand for well-raised farm products, A. R. Moody, as a boy, persuaded his father to move from Boston to an abandoned farm in New Hampshire. After improving one farm, the family moved to a second and better one, still in New Hampshire.

The boy became interested in the forests of the State, went to the Yale forest school and later became associated with E. C. Hirst, State Forester at Concord, New Hampshire. He left the state forest service to go into the commercial field with a large company, and in their employ made the most complete map of private forest estates ever made in the State. Two years ago he hung out his shingle at Peterboro, New Hampshire, as consulting forester, tree surgeon, and orchardist.

He now has a crew of five men engaged most of the time in tree surgery and orchard setting. Of eight thousand apple trees set in one orchard last year every one has lived. He and his men repaired over one thousand trees last year by filling rotten cavities with concrete, and pruning to improve form and vigor. The profession of tree surgery, or as it is sometimes called, "tree dentistry," is relatively new and offers in some localities a remunerative field to men who will train themselves to render expert work.



Why are these plants different?

ter was cut back (topped) before it had a chance to run up tall and spindling. With veneer boxes crowded closely together on the bench the plant would undoubtedly have grown unreasonably or undesirably tall. By cutting the top off, the plant was forced to produce a number of side branches, and each of them gives us bloom and fruit. So while we may get ripe tomatoes a few days later than from the untopped plant, they will come in more generous quantity. At the extreme left is shown a plant that had been allowed to run up rather tall and spindling, and was then cut severely back. When the plants in veneer boxes are carefully set in moist soil they do not seem to be checked in growth but go merrily on making branches, blooming and setting fruit.

Success with Brussels Sprouts

A vegetable not to be despised—this Brussels sprouts! Many appreciate it, and customers who have learned to like it are willing to pay fifteen cents a quart for the little heads. At least, that is the price they now are asked for this vegetable in the open market. I do not find it such a great trick to grow good plants that bear a quart or two of little heads or "sprouts," provided I get seed of a good variety or strain and sow it early (under glass), so that the plants

P. A. is the Pathfinder

Prince Albert is the grand old joy scout. Every day it finds a hundred or so poor tongue-sore pipe smokers, "lost in the woods," smoking peppergrass and smartweed. And P. A. gently leads them straight to the cool-smoke path that the feet of hundreds of thousands of jimmy pipers have beaten into a fine, smooth trail.

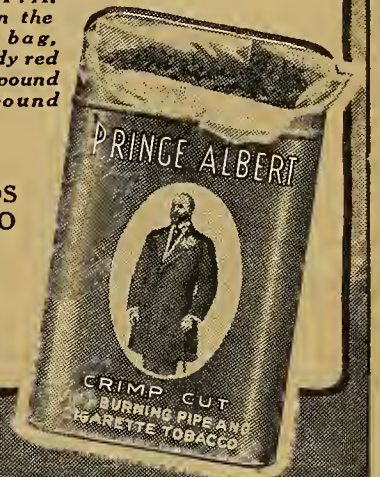
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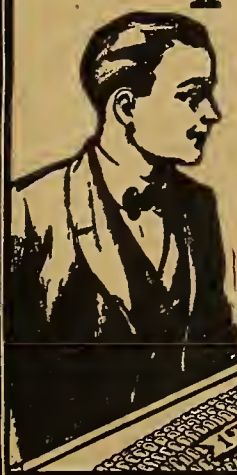
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The Market Outlook

Getting the Profits

By L. K. Brown

THE hog market has pursued the usual course for this season of the year. The killers have used every opportunity to force prices lower for the winter basis, and have been fairly successful. The liberal receipts of light hogs at Eastern points have curtailed order buying, thus removing this competition. The country has balked at the slumps but has sent in liberal supplies at every good advance. There have been a great many 130 to 175 pound hogs lately, with but few heavy hogs, and few pigs. This has held the average weight down and also made a light production of lard.

The fact that the bulk of these light hogs are thrifty and healthy shows that the country is not of the opinion that pork-making is profitable at the present relative prices of corn and hogs. The amount of profit varies with conditions from none at all to a moderate one. A 100-pound shote in the country is worth \$5.50 or \$6. If ten bushels of corn are put into him he will weigh two hundred pounds at the end of three months. This ten bushels of corn is worth from \$6 to \$7.50, according to locality. The hog at the end of this period is worth \$14, figured at corresponding quotations. This gives the feeder 50 cents to \$1.50 per head profit for his labor and risk. This means just about a break-even proposition if the feeder buys his corn, but it gives him a fair profit if he grows his corn, for he gets about eighty cents a bushel for it.

What a Rise of \$1 Means

However, there is another side to it. At the end of these three months everyone expects higher prices so that there will be an additional profit. Every cent of rise in price is not gross but net profit; and a rise of \$1 is generally expected, which means \$2 per head added profit.

If a man will look around him he will also notice another phase of the feeding proposition. The farmer who always feeds out his crop of pigs and empties his corn cribs by this route somehow before long has lots of stock around, and has his farm paid for, and raises larger crops as the years go by. He is always in position to pick the best of his females for his breeding herd, and thus the quality of the stock is maintained or improved. His neighbor who figures there is no money in the feeding game sells his hogs when it takes ten or fifteen to make a wagonload, and spends much of the winter hauling his corn to the elevator. While this man may make a comfortable living, he seldom gets ahead. Some of the reasons for this difference can be seen at a glance, while others cannot. It is results in the long run that count anyway, and not man's reasoning about it.

The Meat Producer—the Grain Producer

Of course there are always local conditions to alter individual cases, such as disease, the scarcity of feed, and proper sheltering from the weather; but it is seldom that it is good policy to sell immature stock at more or less of a sacrifice and then have grain to spare. Of course where grain must be bought, this means a cash investment and additional work, and this takes a nice little slice out of the profits. For example: With the present hog market it is about an even game where one must buy his corn. If the values remain the same he gets wages for his work—no profit; if the market declines he loses; and if it advances he makes a profit. However, when he feeds he has a chance during the winter to pick the best from his gilts and the best from his sows for next year's breeding herd, and thus has a better herd than the year before, and is therefore better off.

It is the meat producer and not the grain producer that gains substantial wealth and has the larger credit at the bank.

Vagaries of the Market

By J. Pickering Ross

THE sheep market last month supplied a series of vagaries lively enough to startle the most apathetic of buyers and sellers. By the twentieth of the month a tumble of from \$1 to \$1.50 in lambs and from 50 to 75 cents on sheep took place without any apparent cause.

After that date things again took a turn. This time the curve was an upward one, and this again was without any visible reason; but it served to put the market on a quieter and more reliable footing—top lambs, \$7.50; bulk, \$6.50 to \$7.25; sheep, top, \$4.85; bulk, \$4 to \$4.75.

It has always been contended in this column that, in the present condition of the sheep trade, as soon as the \$8 mark is reached for lambs and the \$5 for sheep, an early slump may be looked for. The almost irresistible temptation to realize which a big profit presents to most people causes many to send stuff to market before it is really fit, and prices, as a matter of course, drop. Another cause is to be found in the fact that as soon as mutton and lamb exceed or even equal beef and pork in price the public are sure to fall back to their old-time preference for the latter. In time, as the taste for the former grows,—and it is rapidly doing so,—this distinction will cease.

Though these acrobatic performances of the November market caused some losses and a good deal of annoyance at the time, yet I think they will serve a good end by persuading reasonable men to send their stock to market only when fit, and to cease to try to catch a market which has only made a jump, because short supplies and a big demand happened to occur simultaneously.

These vagaries of the market in no way seem to have affected the demand for feeders of all kinds, nor to have lowered prices to any appreciable extent.

The wool market appears so far to have suffered nothing from the changed tariff, and expert opinion appears to be that as long as the foreign markets remain as strong as they are at present we need fear no great falling off in prices here. It is generally admitted that the world's supply of wool is unequal to the demand, and that it will take considerable time and much effort to more nearly equalize matters.

Congress and Cholera

SENATOR POMERENE of Ohio and Senator Kenyon of Iowa are the leaders at Washington in a fight against the swine plague. Senator Pomerene has introduced a bill asking Congress to appropriate half a million dollars to control and, if possible, to eradicate hog cholera in the United States, especially in the corn belt of the Middle West. This bill, if passed, will be one of the most important appropriations ever made to give discouraged stockmen new hope.

Facts About the "Apple Boom"

By B. S. Candee

A RECENT editorial on the bursting of the western fruit boom has called forth both approval and protest. It depends largely how the individual is affected. Here is a letter from B. S. Candee, a trained orchardist who has spent the last five years in Washington State setting out new orchards, taking care of old orchards, picking, packing and marketing fruit. He does not own land, and we believe his views are impartial. The editors of FARM AND FIRESIDE personally know him to be reliable and competent to judge the situation.

I would be sorry to have any false impressions of a disastrous future for the western fruit industry gain credence through the East. Firstly, people are probably aware that the boom in orchard-land here has been tremendous, and real-estate dealers have reaped a golden harvest, not always careful either of the kind of ground they reaped from. And, as it is a long and expensive business to plant and raise an orchard to bearing age, there are going to be many discouraged people and unsuccessful properties.

The market for apples last winter took a bad fall, and the growers took a pretty small price. It was, though, enough on the average to leave them a fair margin over cost of production and harvesting. It has been a severe jolt, but just exactly what they needed at this time. Our production is going to be so large very shortly that it will be impossible for us to market it at a profit with each district competing against the others, glutting markets and cutting prices. It is a positive necessity that we organize the whole Northwest so as to distribute and market the crop profitably. This has been talked of for a good while, but it took the jolt of last winter's prices to make it plain to all and to start action.

Starting with meetings of growers from all sections at the apple show a year ago, and culminating in the final meeting at Hood River last May, there has been organized the North Pacific Distributors' Association, with headquarters in Spokane. They have contracts for ten thousand car-loads this season, and take in a majority of the growers in every district except Wenatchee. The latter will undoubtedly join next year. The completion of this organization establishes the fruit business on a solid basis. It is absolutely controlled by the growers, and always will be, and they have only to stick to it to insure a prosperous future. I don't mean the kind you read about in real-estate literature, nor so prosperous as our older growers have enjoyed in the golden past,—we've got to bring our box apples down to a fair price that the average eastern customer can afford,—but it is going to be sure and good money.

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The FARMERS' LOBBY.

THE municipal abattoir or slaughtering establishment, municipal markets, the decentralization of control of the market, packing and distribution of meats, and the promotion of meat production in sections of the country which now raise little of it—these are the means which the Government has in mind to cope with the impending and indeed the present problem of supplying meat to this country.

No subject is getting more serious attention at the hands of the economic experts of the Department of Agriculture right now. I cannot make a better statement, in outline, of the view that is now fast being crystallized, than to summarize some remarks that were made by Dr. T. N. Carver, of Harvard, at a recent conference of experts held at the Department to consider the relations of the meat problem to the agricultural industry. I shall not make the attempt to quote him literally.

Meat Cannot Go Very Much Higher

DOCTOR CARVER takes the position that the whole meat-raising industry has got into an unnatural and abnormal status. This may be attributed to the fact that in this country we developed the great corn-raising industry of the Middle West, some decades ago, at a rate so rapid that the world could not absorb the corn crop until it was transmuted into meat. Corn and stock were so easy to produce in that section that it proved economically possible to raise meat by feeding it chiefly on grain. That, Doctor Carver declares, is an unnatural and uneconomic proceeding. He insists that it could not continue long, and that in fact the end of that system is now approaching. The world's demand for food and its requirements for grain are such that the price of corn may be expected henceforward to keep so high that it will generally be uneconomic to turn it into meat before marketing it. Meat cannot go much higher without cutting down the demand.

But meantime this concentration of the meat-raising business in the corn belt has produced another abnormality, in the centralized control of the agencies for marketing, slaughtering, storage, and distributing meats. In short, he esteems the "meat trust" a logical development out of that unnatural concentration of stock-growing in the corn belt. Therefore he concludes that the present centralized control which is wielded by the great packers will disintegrate about in proportion as the meat-raising business diffuses itself, scatters away from the corn-belt States, and settles back into something more like the normal conditions of one and two generations ago.

The Farmer Will Do What It Pays Him to Do

IHAVE myself studied somewhat the conditions in an important corn-raising county in an Eastern State where very little live stock is produced. The farmers sell their corn, instead of feeding it. Why? Because they have found in experience that it pays better. They are mighty prosperous farmers, too.

It would be impossible in the Western corn country, so far as I am aware, to find a corn county with so little stock or interest in stock as in this Eastern one. But that is merely because the West has been favored with better stock markets than the East, and agricultural methods have been so firmly settled into the "corn steers and hogs" routine that it will take time to effect an impressive change.

What, then, is to be done about raising meat if the corn belt cannot be relied upon to continue indefinitely the old methods of production?

Meat Raising Must Become Universal

MEAT must be made a universal by-product of all the farms, instead of almost an exclusive product of the farms of a particular section. That is the Department program. It is the proposition which met the approval of a group of experts who recently conferred with the Secretary of Agriculture on the subject. The Government, through the Department, must lend its influence to decentralizing the meat-growing industry from the West and developing it everywhere else. It is urged that if the domination of the group of great packing-firms over the business of buying, transporting, killing, storing, and marketing meat can be smashed, and if a greater number of smaller establishments can be substituted, covering sections which now are without

Meat Must be Made a Farm By-Product

By Judson C. Welliver

satisfactory market facilities, the agricultural community will presently produce the meat to keep these establishments going.

That is where the municipal slaughtering establishment comes in. "We frankly anticipate," said a Department official, following the meat-supply conference, "that in most cases municipal abattoirs would have to be conducted for a time at a loss. But on the basis of experience in both this country and Europe, we also believe that in a short time they would become self-supporting, and would be a very great inducement to farmers to raise more meat animals.

"Mind you," continues this official, "we are assuming that from the Mississippi River eastward, under these changed conditions, meat animals would be largely a by-product of most farms. Hogs would be raised on pasture, in wood-lots, on alfalfa, on various things that now are largely wasted. Cattle would be raised on pasture, on cornstalks, on silage. Less and less corn, in proportion, would go into the animals because corn will be too valuable. As a side line of every farm, a few head of stock can be carried to consume materials that nowadays are not properly utilized. Remember that a farm without any hogs or beef cattle on it can carry two or three or four hogs and one or two steers without feeding them anything worth mentioning that would represent specific value. Three hogs would be practically clear profit where three hundred hogs might be utterly unprofitable. The task is to get a great many more farmers raising three hogs apiece for market in the neighboring town. We want the town to provide the abattoir as a guarantee that there will be a steady and sure demand for them. We want the abattoir, too, because it will create a local industry, which has a chance to stand against attacks of the big packers."

Here's Where We Have to Go Backward

YES, we are confident that this is the way to attack the problem. It must be brought back to conditions of several decades ago so far as producing the stock is concerned. Let me illustrate:

"They used to raise a considerable amount of excellent beef on Cape Cod for the Boston market. To-day a steer would die of loneliness there. That is because the highly specialized meat-growing business of the West turned out animals in huge numbers; the railroad companies made advantageous rates and gave magnificent service to get them East; the little Cape Cod industry was smothered by that competition. Transportation, capital, special trains, stock yards, vast packing plants—all these were on the side of the Western industry. A packer in Boston would bring stock from as far as the Missouri River cities to kill it in Boston. Having it poured in upon him in such volumes as that, he had no time to worry about the Cape Cod man's little bunch. The great Eastern cities' markets were overrun by the packers and the stock from the corn belt, and the home industry faded away."

What a Texas Abattoir Has Done

TO GET that home industry restored in the villages, towns, and cities of the whole East is the problem in hand. Let us see what the municipal abattoir has done and is doing. Paris, Texas, built one in 1909. Before that the butchers had all maintained their own slaughter places on the outskirts of the town, commonly in thicket or swamp; built of rough plank, without thought to decency, say nothing of modern sanitation. Flies, rats, and buzzards were the sole sanitary, or insanitary, agents. The places were, in short, precise duplicates of just what those establishments are in every town or village that permits them. Odors were frightful, and the people got the very accurate notion that meat thus slaughtered could not be wholesome.

The butchers were urged to co-operate and, through a stock company, build their own abattoir. They would not; contentions and jealousies prevented. Then the city undertook the work.

Its little plant is about one and one-half miles from the town; a one-story wooden structure, consisting of slaughtering department, chill-room, cooler, tank-room or reduction plant, power-house, dressing-room, toilet.

The storage-room for fertilizer was a little distance from the main building. The whole establishment cost about ten thousand dollars. It can handle daily about thirty beeves and rather more of hogs or sheep. The slaughtering-room is twenty-two feet square, with cement floor, good drains, and wooden walls. The drains discharge into a septic tank.

The chill-room is ten by eighteen feet; cement floor; cement walls. Here a temperature of forty degrees is maintained, and all carcasses are held here twelve hours before going to the cooler. The cooler is twenty-two by twenty-eight feet; cement floor; cement-plastered walls; and sewer connections to the septic tank. Refrigeration is supplied here and in the chill-room by a ten-ton ammonia plant.

The tank-room adjoins the slaughtering-room. It has one tank. The offal is handled by means of a windlass and rail. The rendered fat is sold to local laundries for soap, and the tankage is disposed of as fertilizer. There is no waste. Not so many forms of by-product are turned out as from a great packing-house, but everything is utilized.

The Inspector, a Prominent Citizen

OVER this establishment presides, as a veritable czar, the city inspector, at \$1,200 a year. Fees for killing are \$1.25 for cattle, 75 cents for sheep, calves, and hogs. The patron gets the hide, liver, heart, caul, tail, and brain. Carcasses may be held in the cooler five days free; after that, for 10 cents daily charge.

The little plant enjoys a complete monopoly; the town allows no competition, on the ground of health interests. But after the trial that has been given, nobody would think of returning to former conditions. For the first six months it was operated the plant earned \$701 per month, expenses were \$562; profits, \$139. The experience thus far justifies expectation that all expenses will be paid and the interest on the town's investment made good. The town has no wish to make a profit, but merely to pay expenses and maintain the interest on the bonds which were issued to build the plant.

The inspector who bosses the abattoir is also the town's inspector of groceries, meat markets, dairy herds and products, and in short all sources of food supplies. All fees from these services go into the abattoir fund. This pooling of interests keeps all fees very low, gives the town splendid service, and effects a direct economy in that the competition of the town's storage plant prevents private concerns charging unreasonable prices. As a whole the plan seems to be an ideal one for a little city, and the results have been highly satisfactory to the people of Paris.

The Lesson Denmark Brings Us

IHAVE been unable to get information whether the existence of this plant has affected the production of meat cattle in the neighborhood of Paris. Probably not, because it is in a great stock country anyhow. But in other places there has been a quick reaction of the meat-producing business, once these excellent conditions were established.

Doctor Carver investigated this feature of the matter carefully in various parts of Europe. In Denmark, for instance—which has more to teach us than perhaps any other country about co-operation and efficient organization in all departments of agricultural activity—the community abattoir is almost universal. Cities and towns have them, and country districts have them, though of course they are quite different institutions under these varying circumstances. Farmers can bring their animals direct to these plants, and by paying the regular fee, which is the same per animal for the smallest as the largest patron, can have his stock turned meat.

A Condition Much to be Wished For

THIS he can carry away and sell, or he can, in city or town, send it to the municipal cold-storage plant, or to the stalls of the municipal market; for you observe they carry the thing to the last degree of its logical development there—municipal killing, inspection, cold storage, marketing. The gap between the raiser of the animal and the consumer of the meat is made just as narrow and inexpensive as possible. As a result the producer gets more and the consumer pays less. If that isn't pretty nearly ideal, what could be? And we may expect that condition here.



THE COMING OF THE KEWPIES

For Children and Grown-ups Kewpishly Inclined

BY ROSE O'NEILL

WITH ILLUSTRATIONS BY THE AUTHOR



Not since Palmer Cox's famous Brownies has there been such a joyous, lovable creation as Rose O'Neill's Kewpie.

The Kewpie is just what he looks like here—"well rounded at the tumty-tum," a pleasant sight and cheerful. Every month, in the pages of Woman's Home Companion, Kewpies by the score perform every sort of waggish prank, to the jingle of Kewpish verses and to the delight of thousands upon thousands of Companion children and grown-ups.

In Woman's Home Companion are Kewpies, too, in lifelike colors, with fronts and backs to match, which a pair of scissors and a jar of paste convert into the most fascinating rainy-day cut-outs imaginable.

Here is the story of how the Kewpie came to be, by the Kewpie's own creator, Rose O'Neill herself.



with his little hammer. But, the first I knew, they were all on my bedspread, hopping about, or sitting along the bed frame at the foot like a row of chickadees.

They were extremely lively and as hard to count as a brood of little chickens; as they bounced from fold to fold of my counterpane I saw their topknots waving. These must have impressed me strongly, for I murmured with the utmost seriousness, "Turnip-tops."

I think, at the time, I did not notice any distinctions among them. Wag the Chief, the Cook, the Army, and the others must have been there but, in my confusion, they all looked alike to me. They seemed to be about eight inches high, and, as far as I could see, their noses were no more than dots . . . and so I have ever since faithfully portrayed them, in spite of all outcry.

I felt very strange when one alighted in my hand and nestled there, its little wings fluttering against my fingers. I did not close them, but permitted it to sit in the palm. It felt soft like a bird, but oddly elastic, like India rubber; and I remember I was somewhat taken aback to find it distinctly cool to the touch. Perhaps I had expected it to feel more like an orthodox warm baby in flannels. It appeared perfectly comfortable, however, jiggled with its feet, looked at me sideways and chuckled. It spoke, but I did not succeed in catching what it said. It sounded more like a chirp than an actual remark.

Suddenly, with a sort of "backward flip," it was gone. I looked down across my bed. There was nothing there. But I thought there were some odd little dents in the counterpane.

Now, I had often made drawings of Cupids for illustrations, and I had noticed a

slenderuess, in comparison. These Kewpish lines could never justly have been written for them:

The Kewpie wights stay up at nights,
All gayly singing rumty-tum;
Like puddings, they are pleasant sights,
Well rounded at the tumty-tum.

Those old Cupids were neat and personable, I think, but not so much like puddings and Sancho Panza. The place where the waist band ought to be had not such a free, careless, Falstaffian sweep to it. There was a rather reserved *embonpoint*. When I see them now in old magazines, I don't think much of them; . . . they seem pretty poor Slim-Jims.

But that may be because I have associated so long now with the Kewpies that I perhaps expect more plumpness from things than one should, in reason.

Some angles there must be. Not everyone can hope to be, like Mr. Lear, "perfectly spherical."

Well, in the morning I rose less reluctantly than usual, and made some drawings of the little persons that had played on my bedspread in the night; and my family said, "What a ridiculous dream! Your mind must be failing you!" And I named my visitors Kewpie, by way of a pet name for Cupid. Of course, I should have spelled it Cnpie, but the "K" seemed funnier then, to begin it with, and it still seems funnier, though I can give no sufficient reason for thinking so. And, indeed, why should I? So far, no one has inquired.

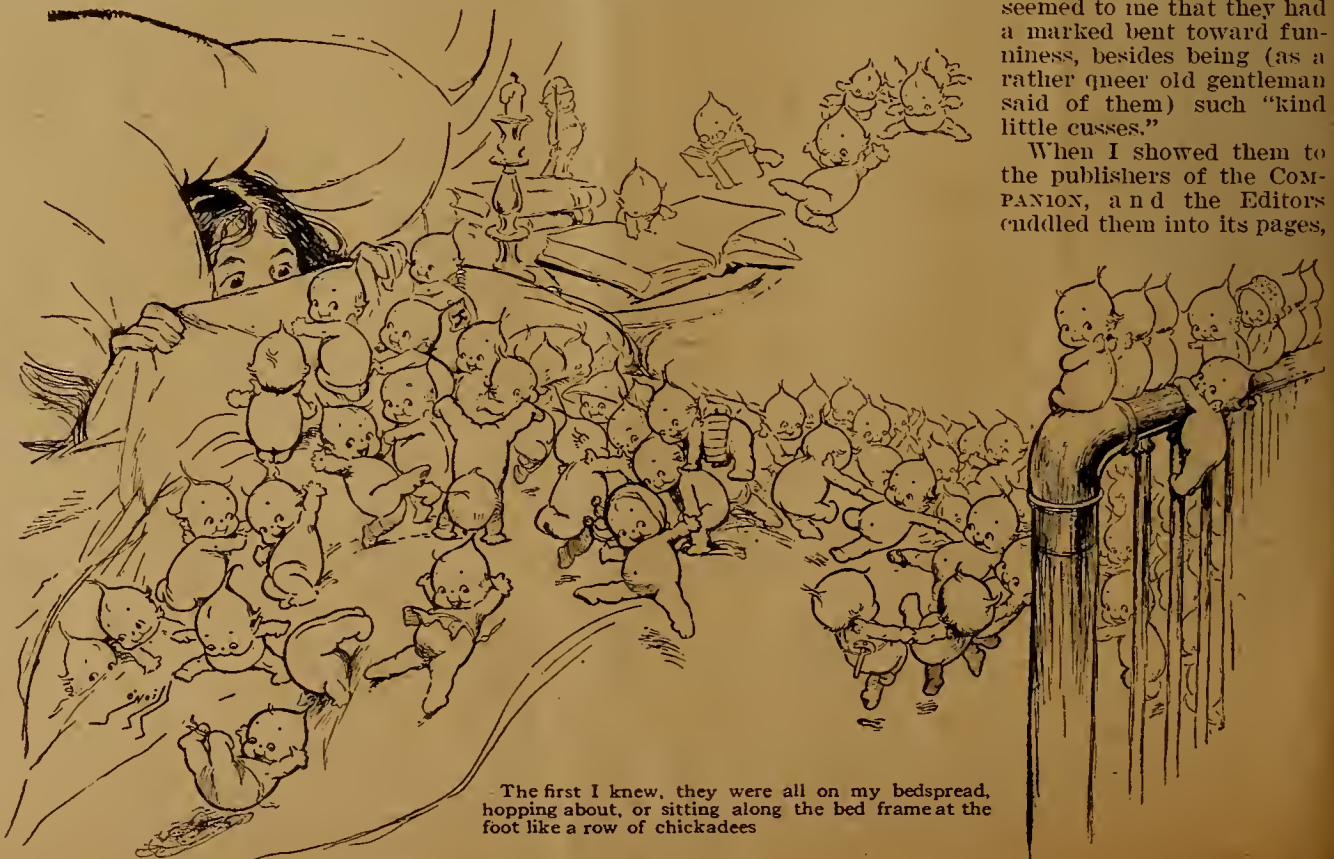
Presently I began, "just for fun," to make verses to chronicle the probable exploits of these little Yoricks. I called them that by courtesy, for I somehow felt they were "fellows of infinite jest" in every intention, even if their infantile wit was not always quite up to it. It

seemed to me that they had a marked bent toward funniness, besides being (as a rather queer old gentleman said of them) such "kind little cusses."

When I showed them to the publishers of the *Companion*, and the Editors cuddled them into its pages,

"Companion Service" means real, downright, practical help to the woman that makes the home—help in solving the thousands of homey problems that daily confront you, whoever you are, wherever you live. Learn why "Companion Service" means a fuller life—read a copy of Woman's Home Companion.

tendency in my hand to put a sort of topknot on their heads. . . . Why, we shall never know, unless the Kewpies were already surreptitiously at work on me. But those proper Cupids had never been of such "full habit" as these. There had been almost a fashionable



they developed what I thought quite estimable qualities, and I began to have considerable respect for them.

It pleased me to think that if children laughed at the impractical jokes and gymnastic achievements recorded they might also draw an occasional lesson in humanity, tolerance and even plain good sense, without feeling the least inconvenience, or suffering that just indignation we all have at being treacherously taught something when we "weren't looking."

I hoped they might observe that the Kewpies, however waggish their intention, never did anything cruel or unjust. I have always rather liked the combination of their magnanimity, judgment and expert execution with their appearance of "little dubs" (in the language of a boy I know), their unsophisticated looks, their innocence, their inadvertent way of tumbling about. Their smiles and sidelong glance were never intended to have more subtlety than those of any rather jocular baby.

In my childhood I had greatly loved the Brownies of Mr. Palmer Cox, and one of the delightful things about them was that one always reposed on the feeling that, whatever they did, they "meant well" by it. So the Kewpies, who I have liked to think might be young, toddling cousins of that earlier illustrious family. A Kewpie meeting a Brownie, I'm sure, would be almost overcome with respect. Well, children from all over the world had begun to write to me and to the Editors about the little "Turnip-tops" . . . not only they, but their uncles and their aunts, their parents and their grandmas. Children, it seems, were continually "cutting them out" and pasting them to all kinds of things. So one day there came to visit me in Italy the Editor, carrying with her a beautiful, wonderful Idea. We sat on a housetop, above vineyards, surrounded by a sea of sapphires, considering it. The result was "Kewpie Kutouts." And henceforth no home was sacred from the trail of the scissors and the paste.

The Kutouts had been going on a long time when I learned, by chance, in the COMPANION that these were the first paper dolls that had a back as well as a front. Now, my time had always been so heedlessly occupied with other matters that I had never made any especial study of paper dolls. Perhaps I had intended to "take them up" in my old age, as I had geology. And so, just by chance, out of my pathetic ignorance of their natural history, I had made paper dolls with backs. What luck it was! . . . although quite a bit of extra work, holding the fronts up against a window pane to trace through the backs. As to the clothes, I do hope they fit, children, in spite of my being no sort of "hand" at dressmaking.

Meanwhile, many children had been writing to me that they really needed a real Kewpie doll; and presently great doll manufacturers began to ask me if I couldn't make one for them to reproduce. I selected the largest and grandest company and soon I was on my way to the Thuringer Wald in Germany, where great doll factories live, and where if you look into any cottage you will see all the people making toys. There couldn't be a better occupation in the world, if only the people could have time to play with them.

Through forests and farmlands, from factory to factory, I went in the motor-car of one of the kind managers, showing the workmen how to make Kewpie dolls. The German doll-makers looked extremely tall and wide as they stood about smiling as they watched me poking smiles into the clay and twisting Kewpie topknots on top with my fingers.

They were very tender-hearted, those doll-makers. I told them the littlest, cheapest Kewpies must be the best of all, because they were probably for poor children. When this was translated to them they nodded their heads gravely, and I was surprised to see there was an indication of tears in their blue eyes. They knew about poor children, poor fellows. They twinkled pleasantly when I told them I wanted the Kewpie dolls to carry a real smile to the world, full of innocence, funniness and kindness. I believe each one put a bit of his heart into the Kewpies that he helped make.

When the clay Kewpies were ready a plaster mold was prepared into which the soft material was poured. Then, I regret to say, all the poor soft Kewpies had to go into great ovens and be baked. I myself pulled several hundred out of one yawning furnace, red-hot but smiling merrily, all laid

in rows on a sort of tremendous dustpan with a long handle. In the end they turned out Kewpie dolls in bisque, and, "like puddings, they were pleasant sights." Well, one factory couldn't make enough, so the great manufacturers started others to work, until now a dozen, or two, or three, in Germany and other countries are busy baking bisque Kewpies and sewing up rag ones and turning them out in rubber and celluloid and other materials, and boxing them up to send to children in America.

When I came home I modeled the sitting Kewpie who smiles with his chin on his hands for the grown-ups as well as youngsters, and he is being made in this country. So I am finished for the present with making that kind of Kewpie, but I never seem to finish with the kind you see in the COMPANION. And all this has come about because the WOMAN'S HOME COMPANION happened to have Kewpie leanings along with all its serious tastes, and let the Turnip-tops go tumbling down its pages. I have discovered that it is extraordinarily hard to stop making Kewpies when you once get started. I, also, have some serious tastes, but when I am most seriously intending to pursue them, and "banish plump Jack," I find myself "kewpieing" carelessly instead.

A Word From the Publishers

This little story of Miss O'Neill's Kewpies gives you a taste of the companionableness of WOMAN'S HOME COMPANION. This quality is also reflected in the fact that, during a single year, it publishes three novels which later sell at the bookstores for \$1.50. Among the COMPANION's recent novels are: "The Poor Lady," by Mary Wilkins Freeman; "The Hands of Esau," by Margaret Deland; "Diantha," by Juliet Wilbor Tompkins; "The Rich Mrs. Burgoyne," by Kathleen Norris; and "Through the Open Door," by Justice Miles Forman.

A new novel is soon to commence, by the well-loved author of the Juliet Stories, Grace S. Richmond. Its title is, "The Brown Study," and its hero is a young minister of a great metropolitan church—a man of wealth and charming personality. The very comforts of the life around him are undermining his usefulness. He escapes in the effort to be of greater service—escapes to the poorest slum of the city, away from the woman he loves.

Another of the COMPANION's coming fiction treats is, "Louise Baird," by Mollie Elliot Seawell. This exquisite romance of the stage and society is notable for the series of brilliant scenes in which the action of the story takes place. It begins at the home of a poor, beautiful girl—a simple country cottage. Then follow the scenes at a home of great wealth—scenes in the most famous cities of Europe, in a Swiss pension; scenes on the American stage. It is a story of ambition realized, and, like all

COMPANION stories, it is the kind "that leaves a good taste behind."

If we could merely list all the novels and stories and special articles and hundreds of practical ideas that appear in every issue of WOMAN'S HOME COMPANION, you would be surprised, we think, that such a vast deal of fun and help, so many evenings profitably filled, could be crowded into twelve magazines that cost for a whole year less than half as much as many spend for a single evening's entertainment.

Among the hundred special articles soon to appear, several will deal with the COMPANION's great national campaign, "Better Babies." Never, we think, has a more significant, more helpful and more typical COMPANION idea swept over the country.

When we tell you that forty States are now organized to carry on the work, that the most eminent physicians and educators in the land are supporting the cause, and that the COMPANION, in scores of state fairs and specially organized contests, is giving hundreds of dollars in prizes, and medals

The monthly dressmaking lesson is one of the Woman's Home Companion's most helpful features. Every single step, every little tuck and wrinkle, that makes gowns "tailor-made" are set forth so clearly that anyone can follow them. A positive boon to "short purses."

of gold, silver and bronze, you will have some conception of the scope of the movement.

Under the COMPANION's lead, too, women throughout the country are organizing leagues to compel honest prices for the food they buy. The stories of both of these great movements appeared at first exclusively in the COMPANION. But while the COMPANION is primarily a magazine for "the woman who makes the home," it also helps to keep her in touch with the important happenings of the day that affect the home.

A thousand ideas on dress, with many pages in full color, showing fabrics and reflecting the latest and best fashion ideas, is one of the COMPANION's leading features. Grace Margaret Gould, the most eminent fashion expert of America, personally edits this department. Four big fashion numbers are published each year at the time they are of greatest value to women who wish to dress smartly, tastefully and economically. There are pages of fashion ideas and designs for the schoolgirl, for the business girl, for the middle-aged woman, for the elderly woman, for the mother, and pages on pages for the children. Especially does the COMPANION meet the needs of the woman who makes her own clothes and those of her children. Just one Woman's Home Companion Pattern may save you many dollars and many hours.

And then there are practical ideas for the care of the garden—ideas that no farmer's wife can afford to be without. Our garden department attracts national attention.

And every month there is a cash prize of \$5.00 or more for the children exclusively—prizes for stories, verses, drawings and photographs. Indeed, the COMPANION is a veritable treasure-chest of pleasure for boys and girls. The famous Puzzle Page by Sam Loyd, stories by the most popular writers for children, and articles on how to make playthings—doll houses, magic lanterns, toys of all kinds—and last and perhaps best of all, the Jack and Betty cut-outs—a complete story book in full color—these all come in every number.

And then there are pages on decorations and household ideas, from the very littlest, most insignificant worry-saving devices down to the big household economies; embroidery and millinery departments with lessons that are practical and simple. There is a menu, too, for every meal in the year; pages of recipes—better food deliciously prepared for less money.

Don't miss the COMPANION for 1914. It is a storehouse of ever-fresh ideas and inspiration—in a very real sense, it is the WOMAN'S HOME COMPANION. Cut out the Kewpie Kewpon and mail it to-day.



Rose O'Neill, a writer of distinction, artist, exhibitor in the Paris Salon, and creator of the Kewpie—herself the most original, joyous, droll and delightful Kewpie of them all



The German doll-makers looked extremely tall and wide as they watched me poking smiles into the clay and twisting Kewpie topknots

There are 12 departments of household service in every number of Woman's Home Companion—"Better Babies," Cooking, Entertainment, The Tower Room, Embroidery, Knitting and Crochet, Boys' and Girls' Department, Sam Loyd's Own Puzzle Page, Household Discoveries, Page for Club Women, Fashions and The Postscript Page of verse and humor.

When you think that each issue of Woman's Home Companion represents an investment on the part of the publishers of over one hundred thousand dollars, fifteen cents seems a trivial sum for which you can enjoy the entire benefit of this investment. Woman's Home Companion costs 15c a copy—\$1.50 a year.

Kewpie Kewpon

We should like you to have one of the actual numbers of the WOMAN'S HOME COMPANION, containing a page of the Kewpie Kutouts in full color. Simply write your name and address on this Kewpie Kewpon, enclose a two-cent stamp for packing and postage, and send it to The Crowell Publishing Company, Springfield, Ohio (where FARM and FIRESIDE is also issued). A recent number of WOMAN'S HOME COMPANION will be mailed to you at once.

Name

Address

The Crowell Publishing Company, Springfield, Ohio, Publishers of FARM AND FIRESIDE, WOMAN'S HOME COMPANION, and THE AMERICAN MAGAZINE.



The Burden of Yesterday

By Adelaide Stedman

Illustrated by R. Emmett Owen



Synopsis of Preceding Chapters

William Drake is a business man whose large income flows through the fingers of his widowed and dependent sister-in-law. She, with her two little girls, lives with Mr. Drake's mother, and the household is quarrelsome and extravagant. When, therefore, Drake finds himself falling in love with Faith Hamilton, he realizes that he cannot afford a wife. Just at this juncture Laura, the sister-in-law, is offered a home for herself and one child with a rich and elderly relative. Drake feels that his path toward Faith is cleared, but just as this summit of his hopes is nearly realized Laura breaks down at the prospect of being separated from one of her daughters and Drake finds her again dependent on him indefinitely. His mother, however, has divined the situation, and out of her great love for William she resolves to ask the relative, Jobyna Price, to take both children.

William has a young secretary named Robert Lewis, whom he has rescued from the Juvenile Court and to whom he is very devoted. This boy has fallen in love with the daughter of an elderly and very rich friend of Drake's, Ernestine Cumnock, and the girl is fond of him, too. Just as matters seem to be progressing happily a shortage of one hundred dollars is found in Robert's accounts.

Chapter XII.

TO DRAKE'S intense surprise, Robert hesitated. "There's no excuse for my—neglecting business," he hedged, "until a thing—like this happens! I thought I had too much—"

Miss Fleming tapped, then put her head in at the door, anxious to see all she could in that moment.

"Mr. Cumnock to see you," she announced, her curious eyes searching for clues of what was going on.

"Show him in."

Robert rose hastily, crimson and out of countenance.

"I'll straighten up that account while you're busy."

Mr. Cumnock's bulk appeared in the doorway as Robert went out. They went through the formalities briefly, then Mr. Drake and his visitor were left alone.

In the minds of both men Robert was the subject of importance, yet, as they shook hands, between them rose the wraith of Faith Hamilton. Each was exceedingly envious about the other's feelings, yet neither dared put any leading questions.

Finally, however, Drake's longing for news overcame his discretion. He had received no word from Faith. She must have changed her plans.

He strove to be circumspect by inquiring for Ernestine, then asking casually, "And—Miss Hamilton?"

"Oh, she left us the day after you did," Mr. Cumnock responded, delighted that Drake did not know it. "She has lost her position," Cumnock went on warily.

"Dickens of a shame that a girl like her has to get out and scramble for a living."

Drake nodded, his eyes lowered. "I can imagine how Ernestine feels about it," was all he allowed himself to say.

"Erny's got a heart as big as she is," her father conceded, seizing the opportunity to approach the object of his visit. "You saw how she backed up young Lewis in his work at the camp. The under dog always has a champion in her."

Mr. Drake realized the truth of this. Faith would never suffer as long as Ernestine knew her whereabouts, so he had no right to intrude on her privacy, since she evidently did not wish it. He—His mind forced itself back to Mr. Cumnock's remark.

"Yes," he agreed heartily. "Ernestine did wonders for the boys. Robert certainly appreciated it and—"

"Then he's a decent sort," the other broke in incisively. "Erny wants to ask him around to the house. What do you think about it?"

Drake was startled. In the stress of his own affairs his words with Robert on the subject of Ernestine had passed from his mind. Now he recollected them with sudden anxiety.

Mr. Cumnock noticed his disturbed expression. "Something phony about him, eh?" he questioned sharply.

Drake's anxiety deepened. Evidently Ernestine had persisted in her desire to see Robert, and suddenly the boy's week of moodiness, abstraction, and impressive dressing took on a correlative meaning. The look of keen, watchful suspicion on the face of the man before him was that of a father on guard.

"Robert is fit to be made welcome in any home," he said slowly. "The more so since he has made himself fit—against odds."

"What odds?" Mr. Cumnock's cold, critical manner hardened.

With no more preliminaries, Mr. Drake plunged into his protégé's story. Never had it been so hard to tell. He spoke warmly, with intense conviction, all of his pride and confidence in the boy showing clearly.

When he had finished they both sat silent a minute. Mr. Cumnock shifted uneasily in his seat.

"Poor kid," he commiserated at last. "He has a tough job before him. You can forgive—such things—but you can't forget 'em."

"It isn't fair to—" Drake started to break in.

The big man shrugged his shoulders. "All the same, now that I know, if the boy had been around and afterward something was missing—I'd think of him. I mightn't mean to. But I would."

Drake winced. The happenings of the morning, against all expectations, corroborated Cumnock's words.

"Where's your sense of justice, man?" he argued to convince himself as well as his listener. "Do you mean to say those six cream puffs are to follow him all his life?"

"He was sent to court!"

"That's it!" Drake's hand thumped his desk for emphasis. "He was caught! That's the unforgivable crime!" His eyes met Cumnock's and held them.

The latter flushed uncomfortably. "No use getting excited about it," he strove to speak easily. "I'm as sorry for the kid as you are. I understand why you told me the story and it was very decent of you. A man can't be too careful with a romantic girl on his hands. Just sheer young Lewis off as easily as you can."

"Ernestine already knows all about him," Drake explained.

"Oh, no!" Mr. Cumnock denied. "You're mistaken."

"Robert told me she did."

A quizzical, nettling look came into the other man's eyes. "You see," he said, "you see how it is!"

"There's some misunderstanding. I know Robert is as honest as the day."

"Oh, come, Drake, don't be a crank!" Mr. Cumnock rallied him, good humored over this easy demonstration of his point. "I guess the boy's all right, and I hope he turns out a credit to you—but as yet—you don't know a blame thing about him."

"What do you mean?"

"How has he ever been tested since you took him? You've given him all and more than he ever dared to expect. What temptation has he ever had to be crooked? I guess this—affair with my girl—has been the first time he's ever wanted to go a little off the track—"

"I tell you there's some mistake—Robert is straight. This minute I'd trust him with my daughter if I had one."

Cumnock chuckled. "It's easy to talk when you haven't got one."

Chapter XIII.

AT THE hour when Mr. Cumnock and Mr. Drake were talking together in the latter's office, Faith was seated at the lunch table, pre-

sided over by Mrs. Hester O'Rourke, the landlady of the boarding house. Mrs. O'Rourke was already cleaning away the plates and cups, rattling them discreetly as a gentle hint that the luncheon hour was over.

But Faith sat playing with her dish of stewed prunes, so deep in thought that she was unconscious that the other boarders had left the room.

The week had been a hard one for the lonely, heart-hungry girl. She was facing the problem of finding remunerative work which yet would not oblige her to leave Berenice all day alone.

Finally the clatter of dishes became so loud that she was aroused and the kindly capable face, smiling grimly at her, suddenly seemed to promise help.

Impulsively she told the practical Irishwoman of her search for a suitable position and its failure, and asked for advice.

"Look at the 'Help Wanted—Female' column and mebbe ye'll find somethin'." She handed Faith the morning paper from the sideboard.

Faith looked and suddenly her face brightened as she read aloud:

"WANTED—A nursery governess, to attend boy of 4. Must be young and active. Mrs. Graham, Fifth Avenue."

"I'm going to apply there. Oh, Mrs. O'Rourke, if I only could get such a position!"

That afternoon a butler admitted Faith to Mrs. Graham's home. Presently Mrs. Graham entered the library where the girl was waiting, and a satisfactory interview ensued. Mrs. Graham's practiced eyes saw immediately that Faith was thoroughly accustomed to all the refinements of life, and this recommendation, together with Mrs. Kershaw's warm letter secured her the position.

Terms were being discussed when a young man appeared at the door, only to excuse himself when he saw that his mother was engaged.

Presently, however, when Faith had gone he reap-appeared questioning, "Who's the queen, Mater?"

"Don't be vulgar, William," Mrs. Graham reprimanded. "That's the new governess I've engaged for Archie."

The young man chuckled delightedly. "Here's where Archie sees a whole lot of Big Brother."

His mother gave him a sharp disapproving look and left the room. Her son's attitude disturbed her. After a half-hour's thought about the complications which might follow, her fears were so aroused that she wrote a note to Faith saying that she very much regretted to inform her that their old governess had decided to return, so she could not make use of Miss Hamilton's services.

Faith had left Mrs. Graham's, her heart singing. Arrived at home she wrote an enthusiastic letter to Ernestine; then her thoughts turned to Mr. Drake. Now that she was no longer in a position to be pitied, she could let him know her whereabouts. A longing to hear his voice sent her to the telephone.

When she hung up the receiver her heart was beating wildly. He was coming to see her that evening!

At dinner she was so radiant that the boarders redoubled their efforts at sociability. Afterward she reascended to her room, followed by Mrs. O'Rourke, who was to perform the office of dress fastener. Mrs. Graham's note was under her door.

As she read the brief formal communication her face frightened the good-natured Irishwoman.

"Au' sure, me darlint," she questioned, "I'm hopin' nobody's dead?"

"Oh, Mrs. O'Rourke, I'm not to get that position after all!" She spoke slowly, her disappointment too deep for tears.

"You'll find somethin' better, moind what I say. There's as good fish in the sea as iver was caught."

As she talked Mrs. O'Rourke hooked Faith into her blue mull frock, introducing several comforting pats into the operation. Then she was obliged to go downstairs.

A half hour later she toiled up again with Mr. Drake's card.

Faith had decided not to see him, but staring at the little engraved pasteboard which indicated his near presence her courage failed.

"Tell him I'll be right down," she instructed Mrs. O'Rourke.

Mr. Drake received the message with such a genial smile that the woman's loquacious tongue loosened immediately.

"An' sure it's cheerin' up she needs this evenin'. p'what wid losin' her position an' all!"

Drake involuntarily looked a startled question and Mrs. O'Rourke, nothing loath, poured out the whole story, only Faith's step on the stairs stopping her.

Drake knew he should not have listened, yet he was glad to have heard the truth, for the moment he saw Faith's erect little head and smiling face he realized she would never speak of her difficulties.

The evening passed with startling swiftness.

The cheap little gilt clock on the mantel struck eleven. He rose hastily. He would go away. Sometimes flight was brave. Their hands met in farewell. Then the inevitable happened. Faith was in his arms.

"I love you!" he cried brokenly. "I love you. I have no right, but I love you!" Hastily, almost incoherently, he told her of his family responsibilities, ending with the old dismal finality.

"I can't afford another establishment, but there must be some way Faith. I'll find some way now that I know you care."

Then they forgot prudence, forgot the future, forgot responsibilities and cares. They had found each other. That was all that counted.

[CONTINUED IN THE NEXT ISSUE]



They had found each other

OUR SUNDAY READING

Who's Who in the Bible

By Wm. A. Lippincott

THE Old Testament is a rural book. In the books of Exodus, Deuteronomy, Leviticus, and Numbers, you will find statutes compelling the conservation of soil fertility, checking the concentration of land ownership in the hands of a few, and so endeavoring to escape the evils of tenant farming and the absentee landlord; laws governing the leasing of land, prohibiting the removal of landmarks, giving the emigrant farmer a square deal, arranging for damages in case a field of grain is burned or an animal falls into an open cistern. And a broad program of co-operation was carried out which the farmers of to-day are only talking and dreaming about.

Country Boys of Long Ago

Were most of the big men of the Old Testament country boys, or did they come from the city?

Cain and Abel (Gen. 4: 2-4) were farmers, and farming was already specialized, for Abel was a stockman while Cain was a grain farmer. With them started the age-long conflict between the stockman of the range and the more settled tiller of the soil.

Abraham, Isaac, and Jacob were stockmen of the wandering type such as has only rather recently disappeared from our own Western ranges. In Genesis (13: 1-18) you will find a little drama enacted that must have come to pass wherever there has been an open cattle country. The range got short and feed scarce. The herdsmen of Abraham and his nephew Lot quarreled. The country was not big enough for both of them, and to avoid family trouble they parted. In this connection it might be noted that Lot made the fatal mistake of choosing good land in a bad neighborhood, and a further mistake of moving to the city and becoming to all intents and purposes a retired farmer, with the common modern result of dissatisfaction and trouble.

Isaac, the son of Abraham, was a farmer who married into a tricky family and had a tricky son. That son, Jacob, was shrewd enough to fool his father and cheat his brother out of his rightful inheritance. To escape his brother's anger he had to leave home. He got a job as herdsman with his uncle Laban, his mother's brother. His uncle was up to a few tricks himself and tied Jacob up in a bargain that kept him working for him over fourteen years. During this time he changed his wages ten times, and we should judge from Jacob's complaint that the revision was downward. Jacob retaliated by selecting the strong lambs for breeding purposes, in the flock that had been assigned to him, and allowing the weak ones to breed in Laban's flock. He tried to produce striped and spotted sheep, which by agreement belonged to him, by placing reeds in the drinking troughs at the time of breeding. While the possibility of accomplishing this is not admitted by modern science, an astonishingly large number of farmers still have implicit faith in its possibilities.

Ancient Eugenics

Jacob, married two of his tricky uncle's daughters, and it is no wonder, as Uncle Henry Wallace points out, that all of Isaac's grandsons but one turned out bad because they were practically inbred with reference to sharp practice.

In the character of Joseph, the one boy who turned out well, he finds a fine illustration of the law of heredity called "atavism," or the creeping out of characteristics from a remote ancestry. In Joseph is found the character of Abraham, but developed, broadened, refined.

The Wisdom of Farmers and Herdsmen

It was Joseph, the son of a farmer, who laid out the first program for cornering a national grain market. And he presented that program to the king of Egypt in such a clear and convincing way that the king offered him the job of carrying it out. It was through this corner that he was able to wrest the land from the powerful and threatening Egyptian aristocracy and centralize the title of all real estate in the name of the king.

The king of Egypt at that time was one of a foreign dynasty known as the "Shepherd Kings" because of their fondness for live stock. The native Egyptians were vegetarians because of religious scruples, and had no skill in animal husbandry. It was because of their skill as stockmen that Pharaoh welcomed the father and brothers of Joseph and gave them land in Egypt. It was when a new dynasty came upon the throne, that was

not favorable to stock culture, that the children of Israel came into disfavor.

Men of Vision

Moses was educated in the university of Egypt, but he was a failure until after he had had several years' practical experience as a herdsman for Jethro.

In common with most of the preachers of Old Testament times, the prophet Ahijah was a rural man.

Elijah, who was keen enough to outwit the brilliant and scheming Queen Jezebel, went about preaching in his shepherd's mantle.

We are told of Elisha, his successor, that at the time Elijah offered him a job as his helper and understudy he was plowing with twelve yoke of oxen.

Amos, who preached that Jehovah was not simply a local tribal god but was the God of all peoples, who judged them not according to creeds and ceremonial rites but according to their acts, was a shepherd and dresser of sycamore trees. He might perhaps be classed as a general farmer, since the fruit of the sycamore tree was ground into flour out of which a coarse bread was made which was consumed by the poorer classes. Who but a breeder of live stock would think of condemning the aristocracy, as he did, for eating the "lambs out of the fold and the calves out of the midst of the stall"? It was not in accord with his ideas of thrifty husbandry and good breeding practice.

Micah, the man who gave the best brief definition of religion that had been offered in his day or that has been formulated since, was the son of parents who homesteaded on the borders of the Philistine plain when it was thrown open for settlement by King Uziah. That definition read, "What doth the Lord require of thee but to do justly, and love mercy, and to walk humble with thy God."

Jeremiah, the stalwart progressive in religion, who was tried for heresy and put in prison because he was far-seeing enough to predict that if the people did not change their ways the surrounding tribes would overrun the country and destroy the temple along with the rest of the town, was from the little country village of Anathoth, a few miles north of Jerusalem.

When Saul, first king of all the Hebrews, first comes to notice in the Old Testament, he was out on the range looking for his father's asses that had slipped their picket ropes or escaped the wrangler.

David, when we first hear of him, was only a red-headed farmer's boy.

"They Will Maintain the Fabric of the World"

Among all these men of leadership and eminence, however, not one had won his spurs because of his leadership in agricultural life. Why?

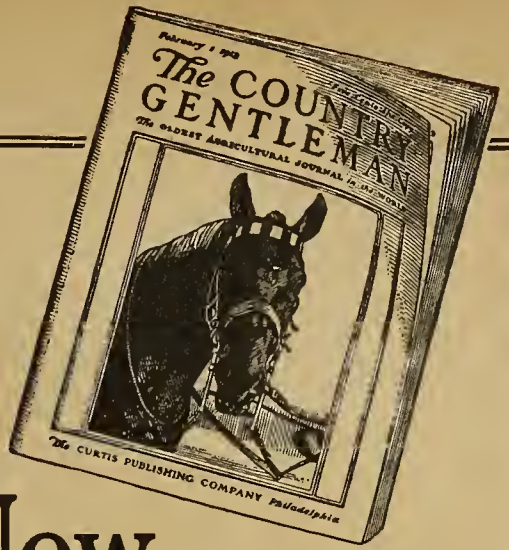
A Hebrew writer of the name of Dirach, who lived over a century before Christ, and whose writings are to be found among the apocryphal books of the Bible, sensed the situation when he said:

"The wisdom of the scribe cometh by opportunity of leisure; and he that hath little business shall become wise. How shall he become wise that holdeth the plow; that glorieth in the shaft of the goad; that driveth oxen, and is occupied in their labors, and whose discourse is of the stock of bulls? He will set his heart upon turning his furrows; and his wakefulness is to give his heifers their fodder. All these put their trust in their hands; and each becometh wise in his own work. Without these shall not a city be inhabited; and men shall not sojourn nor walk up and down. They shall not be sought for in the council of the people; and in the assembly they shall not mount on high. They shall not sit on the seat of the judge; and they shall not understand the covenant of judgment. Neither shall they declare instruction and judgment; and where parables are, they shall not be found. But they will maintain the fabric of the world; and in the handiwork of their craft is their prayer."

This is a startling statement of our modern state of affairs. The need of rural life is leadership. And rural life, now as then, is producing great numbers of great leaders. But big business and the professions are beckoning them away. The pressing rural problem is so to bind the rural people together economically and socially that they may offer big jobs to big men, and the prizes to be gained in rural work may be comparable in dignity and difficulty with eminence in business or in the professions.

Your Grandfather Read It
Your Father Read It
Are YOU Reading It?

Old Farms Made New



An old man can never be made young. A worn-out reaper is fit only for the junk heap. A horse that is past usefulness must be retired.

But an old farm can be made new!

The owner of a hundred-acre farm was beating all his neighbors in crops, yet his business was a fizzle.

It looked as if he'd have to quit the game to make a living. But he told his troubles to a farm-management expert. The expert got busy and made that farm over from pasture to corncrib. He moved fences, started rotations—did just the things an expert replanning a factory would do.

And when he was done the deficit had been turned into a profit.

For several years the Department of Agriculture, through its field agents, has been experimenting with various farms, with the owners' cooperation, along the lines of system and efficiency. We are able to publish the results in a series of four articles, of which this is the first, under the title, *Old Farms Made New*. They tell how to replan a farm for economy in time and labor.

PECANS—A Tree Crop of Tomorrow

A plantation owner set out a sixteen-acre pecan orchard at a cost of \$600. Three years later a friend asked, "What will you take for it?"

"It's not for sale," the owner answered, and \$1800, \$3000, \$4000, wouldn't budge him. Why?

"Because when it is ten years old I can sell it for \$16,000—\$1000 an acre," he declared. Now it is nine years old and he wouldn't take \$16,000, because it will soon be paying twenty per cent on that valuation.

Tree Crops is the next big thing in farming, says Dr. J. Russell Smith, and he understands this subject better than anyone we know. He studied the nut orchards of this country, and some friends of the University of Pennsylvania thought so highly of his work that they sent him on an 18,000-mile trip through Southern Europe and North Africa, where pecans, chestnuts, walnuts, olives, dates and the rest have flourished for centuries.

He returned with a new faith in tree crops. He tells in this series of articles how the nut industry must be reestablished in America.

Fresh Fowl—or Frozen

Cold storage is a saving grace to the farmer—it prevents glutted markets and equalizes prices the year round.

The poultryman especially will find that the cold-storage plant is his best friend. Here's a story that tells what it means to you as no other article you ever read has told.

A Woman and a Windmill

In the homesteading game on Uncle Sam's free land women win out as well as men; women of pluck and common sense, like this woman who took a windmill along with her when she went out to try to make a home for herself.

"Any woman can do it," she says, "if she will buckle down cheerfully and not try to be a parlor ornament."

This real story of a real woman is better than fiction.

Out West—The Little Landers

Can a family farm a quarter of an acre and get a living out of it? That's the claim back of Southern California's Little-Lander movement. Ever hear of the little landers? We have investigated them. You may be interested in the result.

These Are a Few of the Big Features You Will Find in One of Our Four December Issues. But They Are Not All

Growing Alfalfa for Market. A hundred dollars an acre in a droughty year looks good to Kansas farmers, and their cornfields are rapidly becoming alfalfa fields. Have you tried alfalfa as a money crop?

When Dairymen Get Together. For a long time the dairymen have been divided into many factions. Dealers and producers have waged continual warfare. Ice cream manufacturers have been misunderstood. Breeders have followed false gods and have maligned each other's breeds. But harmony is coming. The last National Dairy Show was really a peace conference as well as a school for producers, dealers and manufacturers. Our article on the Dairy

Show will have a new point of view. It's not merely a list of prize winners, but a foresight into dairy futures.

Progressive Agriculture. A girl made \$107 from tomatoes on a tenth of an acre. A boy raised 167 bushels of corn on an acre. Uncle Sam is teaching 92,000 boys and 33,000 girls how to get the most from the farm, and they are teaching their fathers and mothers.

Then there's a great woman's department, with the advance guard of Christmas shopping suggestions and holiday recipes and helpful hints for the "Mainspring of the farm"—the wife and mother. And a dozen more articles dealing with the two important features of the farm business—economy in production; profit in marketing.

IF FARMING IS YOUR BUSINESS YOU NEED

The COUNTRY GENTLEMAN

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THE CURTIS PUBLISHING COMPANY, Independence Square
Philadelphia, Pa.



A naval officer I know canceled a lot of engagements last week in order to devote the time to his dentist.

"I am going on a long cruise," he said, "and I know the value of good teeth. Good teeth mean good health afloat or ashore and a man can't do his work well unless he has good teeth."

In the army and the navy, and in all great industrial spheres the value of good teeth is being recognized. Statistics prove that sound, clean teeth, preserve health and promote business efficiency.

The twice-a-year visit to the dentist and the twice-a-day use of Colgate's Ribbon Dental Cream (the efficient, deliciously flavored dentifrice) insures sound clean teeth, better health and better looks.

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The Stolen Santa Claus

By Harry Whittier Frees

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NONE of the dolly children of Dolly-land ever knew that their Santa Clans had been made a prisoner to keep him from calling on them with his bag of toys, on that certain Christmas Eve. No one ever knew it but Santa Clans himself, Mother Santa Claus, the Good Little Fairy, and the Seven Bad Little Elves.



One bad elf dropped a sleepy powder into his cup

That is, no one else but the Sandman; for he knows all that happens both in Dolly-land and the Land of the Fairies. One night on his visit to Earth-land he told a dear little girl whom I know all about it. The next morning when she awoke, the dear little girl told it all to me. And this was how it happened.

The Santa Claus of Dolly-land is just the same jolly, roly-poly sort of a little old saint as the one who visits the little girls and boys of Earth-land. Only he is not nearly so big, or else he would get stuck in the tiny chimneys of the dolly houses. But he has the same twinkling pair of eyes and the same rosy cheeks. And when he laughs he shakes all over just like a bowl of jelly.

All the whole year long he had been busy making toys for the good little children of Dolly-land. The elves and the fairies had been his faithful little helpers, and it seemed wonderful the number of toys they had to have ready by Christmas Eve. But then you see there were ever and ever so many little dolly children, all of whom had to be remembered.

Among the elves who helped Santa Claus make his toys was a band of seven who were very, very jealous of the children of Dolly-land. They all thought it very foolish of Santa Claus to make so many beautiful toys and then give them all away.

So the Seven Bad Little Elves decided that if Santa Claus was made a prisoner just before Christmas it would prevent him from taking his toys to Dolly-land. And they thought that if Santa Clans missed one Christmas he would keep all the toys he had made for the following one. And then for a whole year, until next Christmas, they would have nothing to do. So you see these Seven Bad Little Elves were both lazy and selfish.

In the morning the day before Christmas, while Santa Claus was reading the letters that had reached him from the dolly children, one of the Seven Bad Little Elves slipped up behind his table and dropped a sleepy powder into the cup of coffee that Mother Santa Claus had just placed there for Santa's lunch.

Just as soon as Santa Claus tasted the coffee he at once became so drowsy that he could hardly keep his eyes open. And he had hardly swallowed the last mouthful before he was sound, sound asleep.

The Seven Bad Little Elves quickly made Santa Claus a prisoner and bound him securely on their sled. With many a chuckle they started away to their snow cave to keep him a prisoner until after Christmas. It looked as though the children of Dolly-land would all be disappointed on Christmas morning.



The elves could hardly untie the knots quickly enough

When Mother Santa Clans discovered what had happened she was nearly frightened out of her wits.

"Oh, dear! Oh, dear!" she sobbed to herself. "What will become of us? All the dolly children will think there is no Santa Clans when they get up Christmas morning and find no toys, and none of them will ever



Seven bad elves bound him on their sled

believe in Santa again! Oh, dear me! Oh, dear me!"

As she sat there in her big armchair, bewailing the loss of Santa Claus and not knowing what to do, the door opened and into the room stepped the Good Little Fairy, dressed all in his warm white furs and his face as pink as a rose.

Mother Santa Claus at once told him how Santa Claus had been stolen away by the Seven Bad Little Elves, and that now he would be unable to take his bag of toys to the many dolly children in time for Christmas morning.

The Good Little Fairy laughed softly to himself and told Mother Santa Clans not to be alarmed, as he would rescue Santa Claus in time for him to make his trip to Dolly-land.

"I shall hasten off to the palace of the Fairy Queen," he said to Mother Santa Claus, "and tell her how the Seven Bad Little Elves have stolen Santa Clans away.

And I feel sure that our kind-hearted queen will find a way to set good Santa free in time for his trip to the dolly children."

So the Good Little Fairy at once hurried out to the stable where Santa Claus kept his reindeer. In a moment he was on the back of Prancer, the fleetest of the eight, and away they sped over the frozen snow.

On, on they went like the wind, until finally the glittering spires of the fairy palace shone in the distance. A few moments later the Good Little Fairy dismounted at the palace gates.

"A message for the queen!" he cried to the

fairy guard, and the massive door was flung open for him to enter. In the magnificent room of gold of the fairy palace sat the Fairy Queen upon her throne, ablaze with all the changing colors of the rainbow. As soon as she recognized the Good Little Fairy, she beckoned him to approach.

"O kind and gracious Queen of all the Fairies," began the Good Little Fairy, as he sank down on one knee before the throne, "I bear a message to thee from Mother Santa Claus, who pleads to you for help. Santa Clans has been stolen by the Seven Bad Little Elves, who intend to keep him a prisoner so that all the dolly children will be disappointed Christmas morning."

"Arise at once, O Good Little Fairy, and hasten with all speed to the cave of the Seven Bad Little Elves!" ordered the Fairy Queen with a wave of her magic wand. "Tell them that Santa Claus must be free before the sun sinks to sleep to-night, or otherwise a swift and terrible punishment will overtake them all. Be on your way, O Good Little Fairy, and before the stars dot the heavens to-night Santa Claus will be on his way to Dolly-land."

[CONCLUDED ON PAGE 22]



He went faster than the wind

Merrie Christmas Out of the Long Ago

In the frosty stillness of early morning, while the stars are still keeping vigil, Christmas is proclaimed under the windows of English homes by the voices of "waits" singing these old carols, these and many more. Mingling at first with one's dreams, the voices seem a heavenly chorus, attuning the heart to the blessedness of the festival. How beautiful it would be if, in some of our American villages, a band of carol singers were organized to sing under the windows at break of Christmas Day! Even in the regions of isolated farms, why not gather in schoolhouse or church and sing in the great feast of good will to men?

Noel Provençal, 1670

Tr. H. S. Chapman

COME Anthony, come Peter,
Hurry John and James and all,
Awaken now, awaken
And be off, nor lag at all.
Haste away now,
No delay now;
For on this night,
In lodging lorn,
Was Jesus born,
'Neath golden star so bright.

There in a stable lowly,
While the winter wind blew wild,
Was born the pure and holy,
The divine and tender Child.

Mary o'er Him bends adoring,
As there does lie
The undefiled and sinless Child,
The Son of God, most high.

The angels in the glory
That down from heaven doth pour,
Their ivory lutes have taken,
The Infant to adore.

God Rest You Merry, Gentlemen

GOD rest you merry, Gentlemen,
Let nothing you dismay,
Remember Christ our Saviour,
Was born on Christmas Day;
To save us all from Satan's power,
When we were gone astray.
O tidings of comfort and joy!

In Bethlehem, in Jewry,
This blessed Babe was born,
And laid within a manger
Upon this blessed morn;
The which His mother Mary
Did nothing take in scorn.
O tidings of comfort and joy!

From God, our Heavenly Father,
A blessed angel came,

And unto certain
shepherds
Brought tidings of
the same;
That there was born
in Bethlehem
The Son of God
by name.
O tidings of com-
fort and joy!

"Fearnot," then said
the angel,
"Let nothing you affright,
For there is born in Bethlehem,
Of a pure virgin bright,
One able to advance you,
And throw down Satan quite."
O tidings of comfort and joy!

The shepherds at those tidings
Rejoiced much in mind,
And left their flocks a-feeding
In tempest, storm, and wind,
And straightway went to Bethlehem,
The Son of God to find.
O tidings of comfort and joy!

But when they came to Bethlehem,
Where as this Infant lay,
They found Him in a manger
Where oxen feed on hay,
His mother Mary, kneeling down,
Unto the Lord did pray.
O tidings of comfort and joy!

With sudden joy and gladness
The shepherds were beguiled,
To see the Babe of Israel,
Before His mother mild.
O, then with joy and cheerfulness
Rejoice each mother's child.
O tidings of comfort and joy!

Now to the Lord sing praises
All you within this place,
And with true love and brotherhood
Each other now embrace,
This holy tide of Christmas
All others doth deface.
O tidings of comfort and joy!

God bless the ruler of this house
And send him long to reign,
And many a merry Christmas
May he live to see again
Among his friends and kindred
That live both far and near;
And God send you a Happy New Year!

Noel of the Tarentaise Valley

Tr. H. S. Chapman

LET a song in sweet accord
Now be heard
To the birthday of our Lord,
Who was born so poor and lowly,
In the night, in the night, and helpless
wholly.

Wrapped in swaddling bands, they say,
On the hay,
'Twixt two humble beasts He lay
In the drear and dark December,
Without help, without help of woman
tender.

Latin Carol, 14th Century

Tr. E. R. Charles

THE Child is born in Bethlehem,
Sing and be glad, Jerusalem!
Low on the manger lieth He,
Whose reign no bound or end can see.

The ox and ass their Owner know,
And own their Lord, thus stooping low.

The kings bring from the farthest East
Gold, frankincense, and myrrh to Christ.

That lowly dwelling entering,
Reverent they greet the new-born King.

Born of a virgin mother mild,
Seed of the woman, wondrous Child!

Born of our blood, without the sin
The serpent's venom left therein.

Like us, in flesh of human frame,
Unlike in sin alone, He came;

That He might make us, sinful men,
Like God and like Himself again.

The Holy Trinity be praised,
To God our ceaseless thanks be raised!

The Holly and the Ivy

THE holly and the ivy
Are now both well grown,
Of all the trees that are in the wood
The holly bears the crown.

CHORUS—The rising of the sun,
The running of the deer,
The playing of the merry organ,
The singing in the choir.

The holly bears a blossom
As white as any flower,
And Mary bore sweet Jesus Christ
To be our sweet Saviour.

The holly bears a berry,
As red as any
blood,
And Mary bore sweet
Jesus Christ
To do poor sin-
ners good.

The holly bears a
prickle
As sharp as any
thorn,
And Mary bore sweet
Jesus Christ

On Christmas Day in the morn.

The holly bears a bark
As bitter as any gall,
And Mary bore sweet Jesus Christ
For to redeem us all.



The Origin of Some Christmas Customs—By A. E. Swoyer

CHRISTMAS is fundamentally a Christian festival, one which has been celebrated from earliest times; yet many of the customs which we practice are founded upon the ceremonies of various pagan beliefs.

The reason for this dates back to the time when Christianity had not spread over the world and its teachers made concessions and compromises in order to do good. Thus when Saint Augustine was sent to convert our heathen ancestors, the Saxons, he was instructed that as far as possible their festivals and practices should be incorporated into the new religion, in order that a gradual change might be effected.

Echoes from the Past

The festival of Yuletide coincided closely with the date of Christmas, and many of our modern usages may be traced to the influence of the pagan feast. The mistletoe figured in mythology in connection with the god Balder, and was also a sacred emblem of the Druids, those ancient priests who found their gods and oracles in trees: Saint Augustine incorporated it into the Christian worship by making its scarlet berries, which grow in groups of three, symbolical of the Holy Trinity.

In fact, the use of all evergreens dates back to this period at least, the Druids believing them to be under the especial protection of the gods and that the wood sprites, threatened by the frosts of winter, in them sought protection and sanctuary. This protection was believed to extend to the house into which they were brought, as well as to its inmates; to us, of course, they typify everlasting life because they never fade.

Among these evergreens the holly has a special significance; as used to-day, it represents the crown of thorns bound upon Christ's brow, and its scarlet berries visualize the blood which was shed for us. Even the Christmas tree, which comes to us from Germany, is a relic of the Gothic faith, in which it represented the tree of life, rooted in earth and supporting the heavens. The boar's head, too, so essential to the Christmas feasts of the Middle Ages, was the relic of a heathen belief; this animal was sacred to the god Freya and therefore a necessary part of the Yuletide festival, from which it was quite naturally adopted.

The custom of hanging up the stockings (or, as in France, the setting out of the shoes) as receptacles for gifts probably came from Sweden and antedates the birth of Christ by many centuries. In that country the shoes of the family were placed along the wall in a straight row in order that they (or their owners) might not stray from the path of righteousness. From this practice it was not a long step to the usage of the present day.

Quaint Acts of Worship

The feasting and merriment of Christmas also dates back to the pre-Christian period; in those times, however, it was in honor of Odin, Thor or other deities, while to us it is a token of rejoicing over the coming of a Saviour to the world. In a somewhat similar manner music, the emblem of rejoicing, praise and gladness the world over, had an added significance in some countries, where the peasants believed that the notes of their instruments served to relieve the pain and anxiety of the Holy Mother previous to the birth of the Christ Child; even to

this day the wild mountaineers of some parts of Palestine descend into the cities on Christmas Eve and play their rude instruments before the shrines of the Virgin Mary throughout the night. In some portions of Italy the peasants serenade the carpenter shops in honor of Joseph—a strange enough custom.

The most beautiful attribute of Christmas, however, and the one in which the spirit of "Peace on earth, good will toward men" is best shown, is entirely Christian in its inception; this lies in the exchange of gifts and in the sharing of our bounty with others less fortunate. Some authorities claim that this giving is symbolical of the rich gifts which the wise men brought to the manger birthplace of their new King; it is more beautiful to believe that it typifies that greatest of all gifts made to mankind in the person of our Saviour.

Whatever the origin of our Christmas customs, they have lost their original significance through the usage of centuries and are to-day an integral part of that festival of brotherhood and of love.

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A Puritan Christmas—By Mary B. Bryan

SOBER folk formed the little plantation of Thirty Mile Island in the midst of the northern wilderness. Whatever wealth might be in the American colonies, they had not yet found it, and life on the frontier had left little room for graciousness in their stern lives. It was into this setting that bright-faced Eunice Spencer came when Gideon Wells and his good wife chose poverty in the new world to compromise in the old. Eunice was the child of one Hubert Spencer, the youngest son of an English gentleman who had been eyed suspiciously by his Cavalier kindred for judgments he had too frankly passed upon royal measures. Estranged at length from his father's house he mingled more with the Puritan side of the family. So it happened that on his death his orphaned daughter was adopted by two of these kinsfolk and brought over the seas to the new world.

Good Gideon and Lois Wells now and again suspected a worldly element in the winsome child, and strove earnestly by solemn hymns and sober readings to drive forth every vestige of the levity with which their charge might be cursed by her Cavalier blood. She endured the hardships of the colorless life with a certain light-hearted courage that, brave as it was, recalled disconcertingly the gallant royalist household of Spencer Hall. Even as her hair of golden-brown would stray from its fastenings in wave and tendrils that caught the sunbeams, so her fancies broke dancing and frolicking through the bonds of labor and doctrine. With relief, therefore, the troubled foster parents welcomed Azael Clark, the son of the minister, and himself a student of divinity, when he begged to carry his suit to Mistress Eunice.

Weeks passed, however, and he seemed no nearer his goal. To be sure, Eunice and he walked at nightfall, as did the other young folk of the little settlement, along the riverside, where willows and elder fringe the meadow land, but Eunice chose the topics of their talk, and her words might well at times disquiet a clergyman.

"Azael, I have been thinking much of these facts," she said one evening. "It seems to me we fly in the face of Providence, fasting so oft in the fall. There are times," she explained, "when the Lord makes to Himself fast. Surely we would follow His leading did we set ours in consonance with His."

"I do not understand you," said the puzzled student. "In the late winter, when stores are low, and early summer before the crops come in. The fall is the one season when plenty is all about us."

"We are so weak we forget the unseen Giver," explained Azael gently. "So our ministers set us days of recollection."

"If the days are of man's setting there can be no more harm in disregarding them than in not keeping those appointed in England for the whole people."

"But," expostulated the Independent anxiously, "the days of the Church of England have no regard to the needs of the people, but only to the calendar. It is but a chance if they meet any want."

"The lot is in the hand of the Lord," she quoted. "Your father is a truly wise man, yet for most men I would as soon the calendar as they should judge of the need of any soul save their own. I cannot but think Thanksgiving Day is another form of Christmas."

Azael's clear face clouded.

"Is our beautiful day of thanksgiving to you only the English day of revelry?"

"You tell but of the wrong in the observance, not of evil in the day."

"If the Lord had wished us to keep His birthday He would have told us the date," argued the young man very eagerly.

"He gave us the time of His death and rising again, and we think it wrong to keep those. If He wanted us to be thankful one day above another, would He not have given us that date, even as He gave one to the children of Israel? Nay, they are all, Old England's and New England's alike, man-made days, Azael."

They had walked back along the straight road that led from the river to the lines of houses set beneath the hills. It was growing dusk and here and there a candle flickered in the small windows. He turned to her entreatingly.

"Why do you speak thus, Eunice? Often when you talk a fear comes over me that you—"

"Oh, if you are afraid of me, Master Clark!" she interrupted teasingly.

"What would I care or fear if I did not love you," Azael's voice was deep. "How long will you keep me waiting, Eunice? Tell me," and he caught her hands. But she broke from him.

"I will tell you at Christmas," she said, lifting the heavy latch of her cousin's door. "Good night."

The long-delayed snow covered the rough road and drifted in the tiny doorways. Early that keen winter day Eunice and Azael started through the woods to fetch the back logs from the clearing. The sober oxen stalked obediently behind them; the snow crunched beneath their steps; the ice snapped in the branches; birds, unmindful of the cold, gave forth now and then a few gay notes; and the sunlight, slipping past the bare boughs, glittered on snow crust and icicles. The tallest trees stretched out short arms into the vast space of the chill blue sky arching high above them. While Azael rolled the logs on the low sledge the girl wandered among the trees, trying if the crust would bear her weight, or making miniature snowstorms among the sprays of black alder. Suddenly she hurried back, her shoulders wound with green, while behind her trailed a wiry runner of vivid ground pine.

"Look!" she cried. "I found this beneath a tree where the wind had swept away the snow. I pulled and the long piece came up, breaking through to the sunshine."

Azael loosened his crowbar and smiled



She sent a roguish glance toward the young man

at her, his thin face losing its severity. "I've seen it often," he said. "It is green all winter."

"Just smell it," and she tossed a long end toward him. "I am going to gather more for the house. I am hungry for growing things." With a sharp stick she poked through the snow, finding now a short piece, now a long tough runner, and often nothing but last summer's leaves, turned to a brown lining of winter's ermine coat. Azael could hear her singing as she wandered here and there. At length she came back, her arms full, and tossed the fragrant mass on the mossy log that headed the load. As she stood stroking the rough side of the near ox, she sent a roguish glance toward the young man who was fastening a rope about the load. Snatching up two strands of pine she tied them round the warm necks of Shark and Dolphin. They opened sleepy eyes in slow wonder and sniffed curiously at the tempting color.

"You shall wear some too," she commanded gleefully, as Azael rose from his last knot, and tearing a spray from her own wreath she stuck it in his homespun coat.

"You must ride," he said, folding a blanket over the damp logs, and with some demur she allowed herself to be swung to a perch behind the evergreens. The oxen leaned together and pulled slowly and steadily at the sled now settled in the snow. A long strain of the heavy muscles, a word of praise from the driver, a creak of wooden runners, and the back logs were started toward home. Eunice still sang softly. The sharp air had brought bright color to her cheeks, and some thought made her brown eyes shine with a light that dazzled the logical theologian.

"What are the words?" he asked. "It sounds like the notes of a bird."

"The words are but vain," she returned, "but the air I have heard my father sing, and I love it."

"It is blithe," he answered. "Someway it suits the day. I have never seen the woods like this. Usually they are lonely and awful, but to-day they are glad. Have you noticed?"

She nodded, and sang another merry bar.

"My good cousins would not care for these," she said. "Yet you called them bird notes. Doubtless the Lord made the birds sing as He best likes."

The Calvinist raised himself dutifully to the defensive.

"Surely songs are not wrong, saving that we have matters of more moment before us. The birds have but this life, while we prepare for another."

The girl shook her head, and the sunlight, as they left the forest behind them, caught the loosened strands of her hair and showed their gold against the green wreaths about her hood.

"We shall prepare best for heaven, methinks, by living this life as best we may, even as I learned to spin the finest flax by making the same twist for coarse thread first."

"Is not that what we try to do?" asked the young divine soberly.

"So we think, but it seemeth to me, Azael, that the Lord hath made all creation glad and we have made ourselves mournful, and perchance He would be best pleased did we sing after the fashion He taught His feathered creatures."

When the next evening Azael stamped the snow from his feet on the Wells's door stone, he could see the dancing flames shadowed on the small curtained windows and hear voices within.

"We have put on the largest log," was Eunice's greeting. "See how gay a fire it holds," and she threw open the door of the wide kitchen where several neighbors were gathered about the hearth.

"Come in, Azael," called Gideon Wells cordially. "Here are letters lately come from England."

The young man bowed deferentially to the group of elder folk and took his seat in a corner, where he watched Eunice passing to and fro with spicy cakes and cider, and listened to the talk as it strayed from present and future England to the past. One described the scene in a church when King James's ordinance was read; another rehearsed the bravery of the Scotch Covenanters.

At length the talkers ceased and gazed into the fire, thinking of tales they did not tell. Azael gazed also, seeing in imagination the log as it had been on the day before piled with green, and hearing a girl's voice singing in the still forest.

Goodman Wells hobbled to the door with his guests and then on into the cold bedroom. Cousin Lois, suddenly remembering the bread to be set, trotted to the pantry for yeast and the coarse rye flour. The minister's son lingered leaning against the high mantel shelf. He watched Eunice as she straightened the chairs and began to gather the dishes after the simple feast. He walked to her and laid his hands on hers.

"Why do you keep me waiting? If you did not care you would send me away."

"Yes, I would send you away if I did not care, Azael," she said, and then she sprang from him, changed in an instant to the embodiment of girlish mirth.

"Oh, you have forgotten! I said I would tell you at Christmas, and this," she clapped her hands in childlike delight. "This is Christmas Eve. Look at the greens," and she pointed to the walls hung with loose strands of ground pine. She came a step nearer, almost whispering, "That is the Yule log, that biggest, Azael, and the songs you liked so much were carols."

Then before the troubled look could shadow his face she stood close before him, her laughter dying, a great light in her eyes.

"Do not fear, my beloved," she said, laying her hands on his shoulders. "This is my last Christmas, if you will. Henceforth 'Thy people shall be my people, thy God my God'."

He drew her hands from his shoulder and kissed them as he answered:

"Whatever be its name, my Ruth, this is surely a blessed night."

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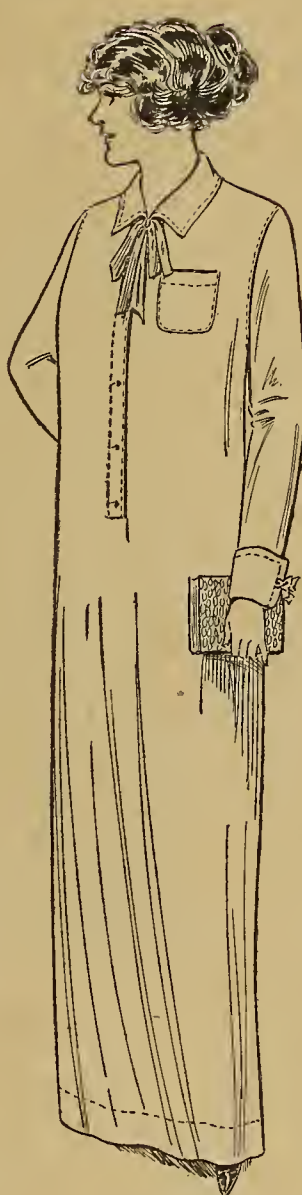
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Double Chimes—By Harriet Prescott Spofford

THE snow lay far and level along the fields and glittered on the distant hills. The moon hung high over it all with a serene and indifferent splendor. And one wayfarer, a dark moving spot, plodded on the highway till stopping at the gate of the little house whose candlelight shone out like a smile but whose dog sprang out with a snarl.

The snarl ceased and turned into glad quick yelps as the man stood leaning over the gate. "You know me, don't ye Tune?" said the man. "I wonder—I wonder—"

What he wondered might be guessed from his next movement. He softly unlatched the gate and tiptoeing up the path and over the snow to the low window, whose shade had not been wholly lowered, looked in.

Amanda French sat there braiding the long strips she had sewed together for her mats, lighted by the tallow candle she had run herself. "I don't care if it is shifless," she said to herself. "It's Chris'mus Eve, and I'm goin' to have some light!" She found a match and lighted the kerosene lamp, a little as if she were doing a fearsome thing, blowing out the candle then and setting it on the high shelf where some herbs were drying and from which the almanac swung on its twine. "There! It's the only thing I'm going to have for my Chris'mus. And it's my opinion that when the Lord set the sun in the heavens He meant folks should have all the light they wanted. Specially them He made it dark for." And she took up her many-colored strips again. But presently she dropped them and sat with her hands in her lap as she looked into the fire, her gaze the long, far-away gaze that sees nothing. Then she gave her shoulders a little shake as she dashed her hand across her eyes. She took an old pocket-book from her workbasket and brought out from its recesses one and another folded paper, opening the last and holding it in the palm of her hand and then suddenly bending and pressing her cheek upon it. It was a faded rose against a faded cheek. Then quickly, as if she were afraid or ashamed, she closed the paper and put it in its place, and tucked the wallet away under the skeins and tapes, and went on with her braiding. "I give her that rose," said the man at the window.

Amanda's memory, as she sat there, could hardly go back as far as the day she first saw the light in the chamber looking to the east across the entry, and where her mother had said, "The child's name is Amanda. I ain't a-goin' ter hev her called out of it, not Mandy, nor any other nickname. Amanda's a word thet means 'she must be loved.' The minister told me. Amanda she's a-goin' ter be."

Amanda she always was, and she was loved as became the name. A delicate, fairylike child, she appealed to the affections with a thousand little winning ways. "I declare, Mis' French," a neighbor said, "ef anythin' was to happen to this child the hull place'd go inter mournin'. She loves ev'body so they hev ter love her back."

"Yes," said her mother. "You see she must be loved. Her name is Amanda."

And when Amanda grew up it was the same way. Exceedingly attractive, equally sweet-tempered, interested in everyone and everything, doing for all, giving the best place to other girls and all the lovers, as far as the lovers would let her—"A pretty piece of perfection," the minister said to his wife.

"She's too good to be true," said Will Douglas when he came home from sea and saw her moving about on her gentle errands and heard the common report, and he straightway proceeded to investigate and as straightway proceeded to fall in love, and to make the fact evident, after his vigorous fashion, in a way that put the other swains to the right about. He came every morning to see what might be done for her; he came to sit out with her on starlight nights and name to her the familiar constellations, and make her shiver with wild tales of his life at sea. "It's glorious," he said, "it's glorious. But I'm getting so I'd like to settle down and have a home ashore. If I had a little wife to come to, the keenest wind that blows wouldn't keep me long away from her." And the sidelong glance of his dark eyes made her tender heart thrill. And then one night his arm stole round her and her head was on his shoulders, and he had kissed her—all before she knew it. The next thing he was pressing for a wedding day. "I can't," said Amanda. "I can't leave mother."

"You won't have to," he said. "You can stay right on here and I'll come back every voyage."

"But—but—I—I don't want to be married, anyway. Why can't we just stay friends—most intimate friends in all the world?"

"Because we can't. Because you are to be my wife. Because I meant it the first time I laid eyes on you. And Amanda, don't you—"

His dark eyes quenched their spark in a pleading look that was almost like tears, although it wasn't tears at all. "Oh, yes, yes, Will, I do, I do—like you. I do like you better than any of the other—"

"No more'n that?"

And then Amanda's little yellow head was in his breast and she was sobbing out, "Yes, yes, yes!" To say she loved him in plain words would have seemed shocking to Amanda.

But say what he might, Amanda would not fix upon any wedding day before he went away to sea. And when he came back it was Christmas time. He brought home a parrot that sang a strange African singsong of a tune and said, "Kiss me, darling," (which Will had spent every spare moment of his voyage teaching the bird), and a keg of tamarinds, and boxes of guava jelly, and pineapples and lemons and oranges, and a web of some lovely white transparent stuff. "And that's for my darling's wedding gown," he said. "What a beauty she will be in it with this wreath of shell roses in her hair!" And he put the garland made of tiniest white shells on her hair, and they spent the evening un-

had roamed off to some other part of the country, or whether he had found another ship, there was no one to say.

The buds on the woodbine swelled; the elm trees were in leaf; the cherries were reddening; the roses had come; but Will was still away. The neighbors said among themselves that he was a roving fellow, he would never be long anywhere; there was a wife in every port. Amanda would never see him again! But in their love for her they never let her hear them. Still it was in the air, and she felt something of it in spite of herself and them. And so the summer passed, and the leaves fell, and another winter drew out its dark days. And then her mother died, and Amanda's heart was broken.

But we do not die of broken hearts nowadays. We do the best we can. And so did Amanda. She took the young school-teacher to live with her till the girl married. She went out night after night to sit up with the sick and dying. Everyone in the village learned to call upon her at need. The children came to her for their pleasures, the young girls in their joys and sorrows, the lads in their hopes and their troubles.

But when she drew the curtain at night, looking out first on the vastness of the stars, it was always to wonder if Will were up in that great outer universe, if he knew of her grief and love; and when after a night of watching and care she walked home in the early morning dew, it was with a feeling that Will had been there just before her and she might find

split on a reef, and me an' my mate was cast up on an island out o' the way o' sailin' vessels. An' there we stayed all these years. There was plenty to keep us alive. But the days and the nights wore us out and we fell to hating the sight of one another, an' we kep' apart at the last, till one day we see a sail an' forgot how tired we was of one another, an' she took us off and a load of birdskins, the feathers like jewels, and a load of pearls we'd fished up. An' that fetched us quite a consider'ble, and I ain't any need to go to sea again as long as you live. Oh, my heart alive! 'twas dreary work thinking of you and what had come to you, and if you thought ill o' me, and if you'd merried. King! How I hated that other man!"

"Oh, there wasn't any, Will, there wasn't any!"

"But, my little darling, I see ye lay yer dear cheek on that rose, an' 'twas me give it, an' then I knowed 'twas all right, w'ile I stood there peekin' thru the window. And I'm goin' for the minister soon as I can leave go of ye, and I'm never goin' to let ye out o' my sight agin."

There came a sound of music on the wind, faint, far off, and sweet. She looked up and saw his dark shining eyes, his dazzling smile, and her heart half stifled her with its swift beats of happiness.

"Hark!" he said. "Don't you hear the Chris'mus bells a-ringing over to Temple? They're weddin' bells too, our weddin' bells. You mind the Chris'mus I fetched ye yer weddin' gown? 'Twarn't half as good a Chris'mus as this is goin' ter be. We've lost ten years, but we're goin' ter make it up. Think of it, Amanda, we ain't ever goin' ter be parted agin w'ile the breath is in us! Merry Chris'mus!"

Santa's New Glasses

By Anna Porter Johnson

AT CHRISTMAS time my Uncle Dan, a great, round, funny-looking man, was at our house for one whole week. My, those days went just like a streak! When we were walking up the hill He saw that house down by the mill. "Say, Ted," he says, and smooths my hair, "How 'bout those little chaps down there?"

He says, "Why, Ted, do you suppose That Santa Claus just really knows Exactly where that old house is, When he brings 'round those gifts of his?"

I says, "He don't go there—I know, Because that pale boy told me so." Says Uncle Dan, "I can't have that, He must be blind as any bat!"

Old Santa heard—well, anyway, He found that house on Christmas day And filled it full of Christmas things, The very kind he always brings. Says Uncle Dan, "I'll bet a fip, He has new glasses for this trip! So that when he went up the hill He spied that house down by the mill."

The Stolen Santa Claus

[CONTINUED FROM PAGE 18]

A moment later the Good Little Fairy was once more on the back of Prancer going like the wind. When he arrived at the snow cave of the Seven Bad Little Elves he found poor Santa Claus tied to a stake, with the band of seven keeping guard.

As soon as he told of the punishment that the Queen of the Fairies had in store for them unless they released Santa Claus at once, they were so frightened that they could hardly untie the knots quickly enough. Nor were the seven little elves ever heard of again. What became of them no one knows even to this day.

After thanking the Good Little Fairy for his kindness, Santa Claus mounted Prancer, and seating his little rescuer before him they started swiftly homeward.

It was already growing dark and Santa Claus feared if he depended on his reindeer he might not be able to distribute all his toys before daylight Christmas morning. So he loaded up his automobile, which went even faster than the wind.

After kissing Mother Santa Claus good-by and giving the Good Little Fairy a parting hug, Santa started away on his journey. Away off in the distance the little twinkling lights of Dolly-land were already shining through the frosty air.

And so it happened that the good little dolly children of Dolly-land were not disappointed after all on that certain Christmas morning.



Like a bird to its nest

tangling it, a gay, sweet evening, when every touch made either tremble,—and there were interims of tenderness,—and apples were roasted in the coals.

It was a green Yule; the rain lashed the pane, but how warm and pleasant it was within doors! Long afterward Amanda remembered that night as something that taught her what infinite happiness might be.

Might be. For now it was all past. Amanda's mother caught cold in that green Yule, and a cruel pneumonia kept Amanda busy in a breathless terror, and the lovely web for the wedding gown was laid away and Will had to sail without leaving a wife behind him.

And he had never come back.

Mrs. French recovered in time, although remaining feeble; and Amanda's heart began to sing, both for that blessing and because it was time for Will to be making port. But surely his ship was late. Never had the voyage taken so long a time. The long succession of furious storms had perhaps delayed the ship—could they have wrecked her? Her heart stood still at the thought.

Days lengthened into weeks; the snow disappeared; and no word from Will, no sound of his ringing step, of his ringing voice. Her eyes ached with the constant effort of turning from her work to see him, long-limbed, deep-chested, with smiles on his tanned face, come plunging up the road: with searching the darkness for him at night. Was he lost? She had no way of finding out what might have happened, for he had dallied and delayed while Amanda's mother was in danger, and his ship had sailed without him: so much was known. Whether he

him on the doorstep; and some nights she sat on that doorstep alone and remembered his arm about her, his face resting on hers, and lived again the glad moments with great heart beats; and on winter nights she left her work with suspended hand, listening, listening, listening. She knew it was foolish—but still—

So the years dragged along, ten of them. There were silver threads now in Amanda's golden locks. The old dog Tunester was still on guard, although lame and blind. The parrot still said, "Kiss me, darling," in raucous tones.

By this her agonies of yesterday had become memories, and in a way like things she had dreamed.

Suddenly, as she sat there, the parrot, who had been sleeping with his head tucked under his wing, shook all his feathers, cried, "Kiss me, darling," two or three times and began to sing his weird African singsong. And there was Tunester barking and yelping. Oh, plainly someone was ill and she was being sent for. But before she could rise from her chair there had been a sound as if one were stamping off snow on the doorstep, and the door had opened and closed with a resounding bang, and then the door of the room where she sat opened a trifle more gently and closed, and a great commanding shape stood there, and she began to tremble all over. And then the shape opened its arms, and like a bird to its nest she fluttered into them. "Little dear; oh, little dear!" a voice murmured in her ear, a remembered, beloved voice. "You never doubted me. You knew I was kep' away—"

"Oh, yes, Will!"

"We was caught up off our course and

Things New and Old for the Christmas Dinner

IF YOU have prepared an elaborate Thanksgiving dinner for the family gathering, you resolve to have a very simple menu for the Christmas dinner; but when the time is near at hand you waver in this resolve and remember some of the good old-fashioned dishes that just had to be left out of the Thanksgiving dinner and you decide to have these anyway, with perhaps a few others that are particular favorites. Many of the dishes on this page, however, can be prepared beforehand, mincemeat is better for standing, and the pies may be made a few days before and reheated just before serving. The dough cake, also, may stand a day or two before icing, and the chickens may be cooked the day before.

A Christmassy look will be given to the table if you can get for your centerpiece a very tiny pine or other evergreen tree, or a small mound of holly with its scarlet berries, with the whitest of linens, the brightest of silver, and shiniest of glass.

CREAM OF CELERY SOUP—Boil one pint of cut celery in one quart of water till tender, add one quart of boiling milk, and rub through a sieve. Season with one teaspoonful of salt, one-half teaspoonful of white pepper, and two tablespoonfuls of butter. Thicken with two level tablespoonfuls of cornstarch or flour, wet with a little milk.

CHICKEN PIE—For this take two full-grown chickens, or more if small, disjoint them and cut the backbone, etc., as small as convenient. Boil in water enough to cover till quite tender, adding a little onion cut very fine—not enough to taste distinctly, just enough to flavor a little. Season well with salt and pepper. When cooked well, take out the chicken and thicken the gravy, using more seasoning, if desired, and several ounces of good fresh butter. Put the chicken into a five-quart granite or earthen pan, add a little of the gravy, and cover with a crust made of rich biscuit dough, cutting an opening in the center to allow the steam to escape. Bake until the crust is done, then pour the rest of the gravy through the opening in the crust. Serve in the pan in which it is baked.

BAKED HUBBARD SQUASH—Cut the squash in two, place in the oven with the cut side down. Bake till tender, scoop out of the shell and season with butter, a little salt, and cream enough to moisten.

STUFFED ONIONS are easy to prepare, and very good. Peel the onions, cook in boiling water till nearly done, then take out of the water, and, after they have cooled somewhat cut out the centers, and stuff with any desired filling. Chopped cooked meat mixed with bread crumbs, moistened with a little gravy, and well seasoned makes a good stuffing. Chopped nut meats mixed with bread crumbs, a little chopped parsley, salt and pepper, and one or two well-beaten eggs makes another filling. After the onions are filled they should be set into a baking dish, a cupful of stock poured around them, and baked in a moderate oven for nearly an hour, basting now and then with the liquid in the pan. When done

pour a cupful of cream sauce around the onions and serve in the baking dish.

FRUIT SALAD, CREAM DRESSING—Six oranges, one can of sliced pineapple, one grapefruit, one pound of Malaga grapes. Cut the fruit into small pieces and remove the seeds from the grapes. Make a dressing of three tablespoonfuls of melted butter, three tablespoonfuls of flour, and one cupful of milk. Cook until thick and smooth, and set aside to cool. Add four tablespoonfuls of lemon juice and two teaspoonfuls of powdered sugar, beating it into the mixture. When ready to serve add a cup of whipped cream.

DOUGH CAKE—Five cupfuls of bread dough, one cupful of butter, two cupfuls of sugar, one cupful of raisins, four eggs, juice and grated rind of one large lemon, and one teaspoonful of saleratus dissolved in two teaspoonfuls of water.

Cream your butter and sugar, and add to the dough. If you have a bread mixer it will mix them well; if not, use a chopping knife till the dough is cut in small pieces, and then work with your hands till it is perfectly smooth and has ceased to be stringy. Beat the eggs separately, and add

the whites last. Stir thoroughly. This makes two medium-sized loaves.

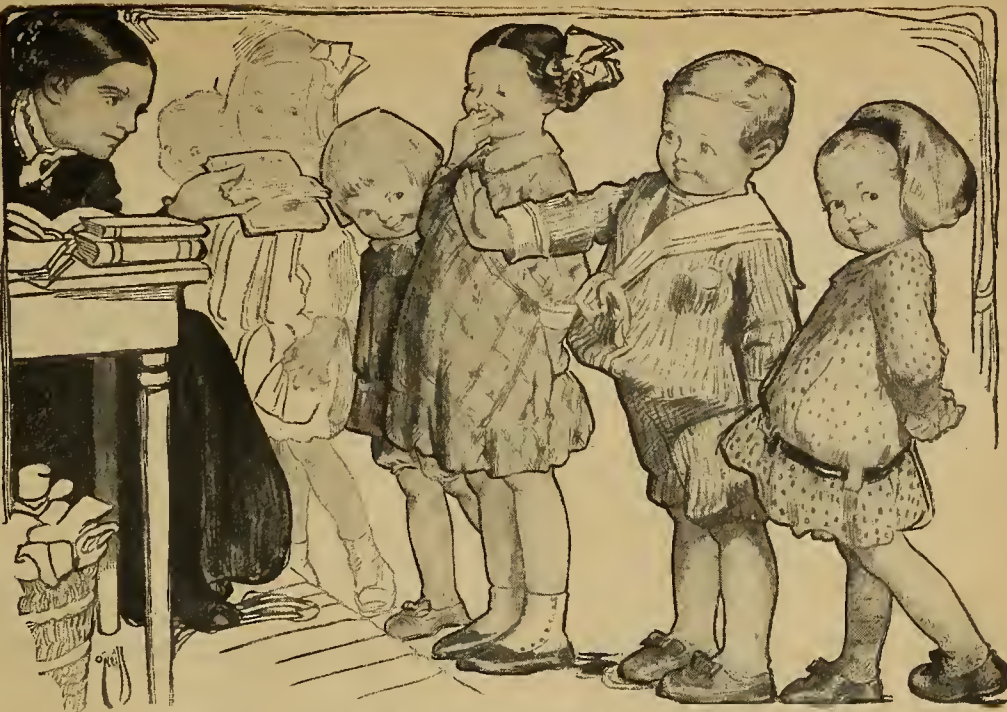
The dough made by using one pint of wetting (milk or water) and three pints of flour is equal to five cupfuls.

MINCEMEAT—Four pounds of lean beef with all gristle and bone removed after boiling till tender. When quite cold chop with one-half pound of beef suet. Add twice the bulk of chopped apples and one and one-half cupfuls of molasses, one cupful of sugar, one quart of boiled cider, two pounds of raisins, two dessertspoonfuls each of cloves, cinnamon, allspice, and nutmeg, one dessertspoonful of black pepper, two tablespoonfuls of salt, and juice and grated peel of four lemons. Mix well, add more seasoning if desired and a glass or two of jelly.

STUFFED DATES—Pull the dates apart and pour hot—not boiling—water over them, give them a stir so that the water may touch each, pour it off and put cold water on at once so that they will not cook a bit. Rub off all the stems and loose pieces of skin. Lay a cloth on a tray and spread them out to dry. Take out the stones and fill with peanuts, then roll in powdered sugar.

Buy the best peanuts (if you can get them raw they are better), shell them, pour on boiling water to loosen the brown skin, slip off the skins, and roast the kernels. When they are done put a bit of butter or a little olive oil in a pan, sprinkle well with salt, shake in the pan till they are well mixed, and they are ready to use.

MINT CREAMS—One cupful of granulated sugar, four tablespoonfuls of water. Boil three minutes, then take from the stove and stir in four tablespoonfuls of confectioners' sugar with the desired flavor in it. Do this as quickly as possible and drop from a spoon onto a marble slab or paraffin paper. From six to eight drops of oil of wintergreen or peppermint are required for flavoring.



Two Ways to Spell a Good Thing.

Teacher: "Dessert."

Bobbie: "Is it where the camels live?"

Teacher (severely): "Certainly not. It is the best part of dinner."

Bobbie: "Oh, I can spell that—

"J-E-L-L-O"

Nobody knows better than the children what the best part of dinner is, and Bobbie expresses the prevailing conviction regarding it.

For the Christmas dinner or any big dinner, as well as for every day the best dessert can be made of Jell-O.

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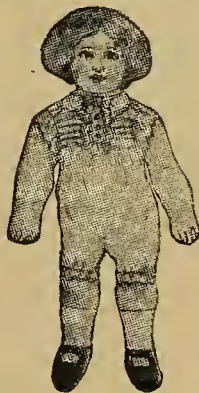
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THESE dolls will make any little girl or boy happy. They can have doll parties and entertain their little friends. All three dolls are beautifully and brilliantly painted in many colors on one large sheet of heavy cloth, all ready to sew up on a machine and stuff. Anyone can follow out the instructions and have the dolls all ready in ten minutes' time.

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GOLDEN LOCKS is just the finest playmate any little girl could wish for, and you will love her as soon as you see her pretty face, bright curly hair and big brown eyes. Golden Locks is over two feet high, and baby clothes will just fit her. She can sit up in a chair or sleep in a baby's bed, and the finest thing of all Golden Locks and her sisters are practically unbreakable.



You Can Easily Win Golden Locks

OUR doll offers are so liberal and easy that there is not a single excuse why every Farm and Fireside little girl should not be made happy with Golden Locks and her sisters. You will get all three of the dolls by accepting the below offer. It is important that you send your order right away, because our supply of the Golden Locks family is limited, but if you mail your order within the next ten days we guarantee that you will receive the three dolls—the big doll, Golden Locks, twenty-seven inches tall and her two sisters.

Our Biggest Doll Offer

Send 50 cents for a one-year subscription to Farm and Fireside, either new or renewal. Also be sure to send us the names and addresses of four of your friends who have children. The three dolls will be sent you by return mail, all charges prepaid, without any extra expense to you.

FARM AND FIRESIDE, Springfield, Ohio

Christmas Gift Rhymes—By Alice Jean Cleator

IN SENDING a Christmas gift, a touch of individuality is given to it by the addition of a little rhyme.

FOUNTAIN PEN
May every letter which this pen shall write

Be as a messenger to bring delight.
I send with it my wish sincere and true
That Christmas may bring happiness to you.

HAND MIRROR
Are you fond of charming paintings?
This one then your heart will win.
Just unfold it from its wrappings
And—look in!

SLIPPERS
Slippers may seem quite commonplace!
They'd hardly do to win a race.
But when you're resting by the fire
They may fulfill your heart's desire.

UMBRELLA
I trust this gift will please your taste,
As though you'd had the power to choose it;
I wish you many sunny days,
So you'll not often need to use it!

KODAK
To "snap" at friends much sorrow oft doth bring,
But with a kodak it's a different thing!

FAN
Go, little fan, and fan all care away,
That every day be bright as Christmas day!

SHAWL
Sometimes when feeling rather chill
This little shawl may "fill the bill."
If it is warm, remember this,
That my affection warmer is,
I wish you merry Christmas cheer,
And may it last all through the year!



A President's Message to the Farmer

*When he nods at me, then I go ahead.
But when he frowns, I stop and think it
over. I would rather have his approval
than that of anyone else in the country.*

THE man who said that was none other than a President of the United States. He said it of you and of every other farmer in this land. It is a pretty big compliment to live up to.

In the American farmer, the President saw a man, honest, just and shrewd—a man of that calm, cool judgment and keen discernment that comes to those who spend much time under the open sky.

No intelligent judgment was ever made blindly; none was ever made without a knowledge of facts. In this complex, modern world of ours, it is not always easy to know the facts. Still harder is it to comprehend the fundamental tendencies that govern the drift of our national life.

We believe THE AMERICAN MAGAZINE can give you a broad understanding of the temper of our times, a new knowledge of the vital under-currents of American life. We believe it can give you a vast deal of real news—the big unreported things that only the prophet's eye can see—the inside

story of the Money Trust in Wall Street, the true meaning of Col. Goethals' work at Panama, deep-down facts about the Immigrants, and the significance of the "New Idealism in Business."

It will appeal to you through its good stories, its serial novels, its illustrations in color, and through its *sound tone of optimism*—the sort that is founded on the solid truth, that you ought to do your job well wherever you are, and that if you do your job well you will get some sort of reward for it here on earth—not necessarily money (which most of us foolishly regard as the only yardstick of success), but perhaps an inner feeling of satisfaction, which, if your skin is not too tough, may be exhibited in a gentle face—something decent to look at and not calculated to scare all the affection out of those who come into daily contact with you.

Why don't you write and ask us for a specimen copy of THE AMERICAN MAGAZINE? We would like to send you one.

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